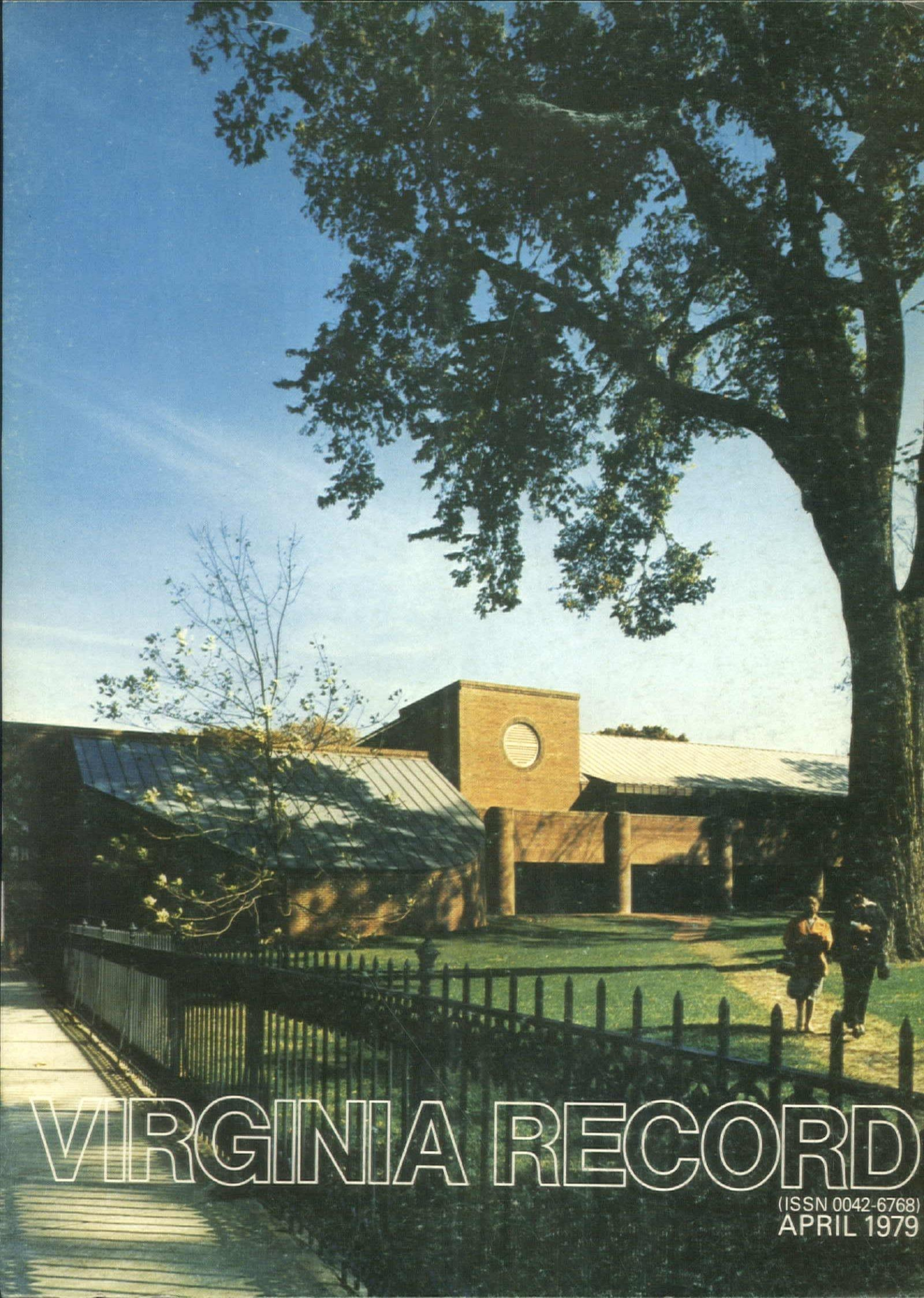


VIRGINIA RECORD

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APRIL 1979



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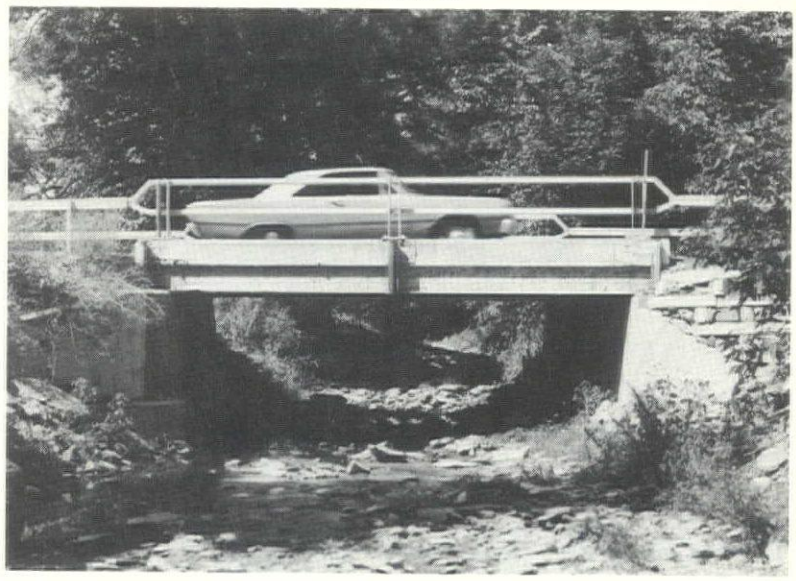
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ON OUR COVER is the Loudoun County Administration Building, located in Leesburg. The project is presented by Kamstra, Dickerson & Associates, Inc., of Reston, on page 12 of this issue. (Cover photo by Robert Lautman, KDA)

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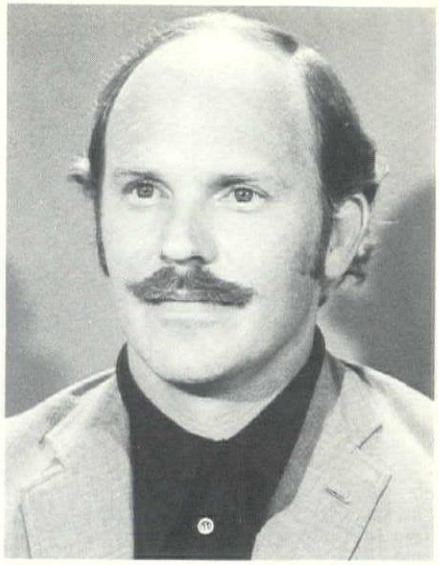
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By
Frederick E. Baukhages, IV, AIA

On Architects and Architecture

What Others Have to Say . . .

In order to continue with and to expand upon thoughts on architects and architecture developed in two recent editorials, August 1978 and February 1979, and to look at other important areas of concern, this guest editorial is devoted to an interview with three practicing Virginia architects, all members of the Virginia Licensing Board.

Last August we discussed the "How" one becomes an architect. In the February issue we discussed the six year old Intern-Architect Development Program jointly developed by The American Institute of Architects and the National Council of Architectural Registration Boards. In this issue we will discuss five questions picked by the writer and the informal responses, at that point in time, by John D. Owen, Jr., AIA of Lynchburg, Frank B. Poole, Jr., AIA of Richmond, and Edgar C. Beery, Jr., AIA of Annandale. The questions are straightforward and simple and both question and answer should be of interest to architects and the public.

The first question asked was "What is an architect?" In all three responses, there was agreement that the architect is, in the words of Edgar Beery, "The single professional . . . best qualified to be at the center in the development of the built environment." Frank Poole went further, "An architect is one who has acquired by training and experience the skills in solving problems, composing space and form and making decisions both technical and aesthetic in nature." The second question asked was "What does an architect do?" Again, all three respondents felt that the architect defines and resolves the clients' problems leading to the best solution for that client and the total environment. John Owen felt that "An architect searches out a client . . . develops a concept . . . retains consultants . . . resolves program requirements, assists in awarding construction contracts and oversees project realization." Frank Poole added, "The architect is the leader of a team of specialists resolving the client's problems into a completed project–designing a physical environment for people to enjoy productive life."

Question three asks "What is the architect's relationship with and responsibility to Society?" Although expressed differently, one thought was prevalent in all three answers to this question. Edgar Beery, in part, answers "The architect has a responsibility to bring order and dignity to the built environment." John Owen feels "The architect is obligated to perform at highest levels of capability and to assure the well-being of owner, consumer and constituent," and in addition that the architect is "designer for public health, safety and welfare . . . " Frank Poole adds that the architect should be concerned with "serving the best interest of the community."

The fourth and fifth questions deal with areas of concern not only for architects but for licensing boards, consumers and legislators. Question four asked each participant to express his thoughts concerning "The architect and Continuing Education." Edgar Beery responds, "The process of continuing education is a matter of personal growth. The architect must recognize the changing needs of society, shifting social pressures and new technology. He must devote, constantly, both time and energy to the learning process or surrender his leadership in the problem solving process." Frank Poole: "Although my personal opinion is that the end of each working day is also [the end of] another day of continuing education, still . . . some form of continuing education is necessary whether it be . . . seminars or structured self-study . . . " John Owen's response is similar to Edgar Beery's: "The architect through act of practice and/or market demands, remains attuned to current and foreseeable developments. There is a responsibility to be aware, acquainted with and to apply continuing changes and improvements in the building arts."

Question five asked each participant to respond to the difficult problem of "The architect and recertification." Frank Poole responded saying "As one who cherishes freedom, I would tend to fight having to take an additional examination, but, having served on the Licensing Board for one term I can see a definite need for it." John Owen: "The architect is a person,

(Continued on page 48)

A.I.A. NEWS

VIRGINIA SOCIETY
AMERICAN INSTITUTE OF
ARCHITECTS

Celebration of Architecture Week

The James River Chapter of the American Institute of Architects is planning a Celebration of Architecture Week June 3 - 9 of this year. This event will be the largest ever undertaken by the AIA, featuring the following activities:

June 3 KICK-OFF with Proclamation by Mayor Marsh and Outdoor Slide Show in Shockoe Slip.

June 4 Opening of ELEMENTS OF ARCHITECTURE AND INTERIOR DESIGN EXHIBIT at F & M Gallery.

June 5 CHILDREN'S DAY program at Reynold's Building, Kanawha Canal Locks.

June 6 ARCHITECTS' WEDNESDAY with OPEN HOUSE planned by several architectural firms.

June 7 TAKE A TOUR DAY with several self-guided tours designed by the AIA.

June 8 HISTORIC PRESERVATION PANEL DISCUSSIONS at Old City Hall.

June 9 KITCHEN WORKSHOP at one of Richmond's suburban malls.

More details are forthcoming. If you need additional information, call Jim DePasquale, at 649-2192.

Architectural Firm Expands

William P. Bowling III, AIA, Architect, has announced the appointment of Ronald M. Martin, AIA to partner in the firm. In order to recognize this important step in the overall expansion of the firm's capabilities, the name, as of January 1, 1979, has been changed to: Bowling & Martin Associates – Architects/Planners.

The Roanoke firm will continue to provide professional services for architectural design, interior design, graphic design, master planning, feasibility studies, and space programming. Major emphasis will be placed on providing a personalized approach to each client's needs while maintaining a realistic balance between aesthetics, function, and cost control.

AIA Elects Honorary Fellows

WASHINGTON, D.C. – The American Institute of Architects announced in February that ten distinguished foreign architects have been named Honorary Fellows of the Institute.

The ten recipients are Yoshinoubu Ashihara, Japan; Irving David Boigon, Canada; E. Gresley Cohen, Australia; Charles M. Correa, India; Wladimir Alves de Souza, Brazil; Augustine Akhuemokhan Egbor, Nigeria; Erik Krakstrom, Finland; Ricardo Legorreta, Mexico; Eduardo Orrego, Peru; and Marion Tournon-Branly, France.

The title of Honorary Fellow is reserved for architects of "esteemed character and distinguished achievement" who are not U.S. citizens and who do not practice in this country or its possessions. The 1979 recipients of the honor will be invested during the AIA's annual convention, to be held in Kansas City, Mo., June 3-7.

Geddes, Brecher, Qualls, Cunningham To Receive AIA Architectural Award

WASHINGTON, D.C.- The American Institute of Architects has announced that the firm of Geddes, Brecher, Qualls, Cunningham will receive its 1979 Architectural Firm Award, the highest honor the Institute can bestow upon an architectural firm.

Located in Philadelphia and Princeton, the firm was chosen for its architectural achievements of excellence and endurance. The award, which is given to "a firm which has constantly produced distinguished architecture for a period of at least ten years," will be presented during the AIA national convention in Kansas City, June 3-7.

GBQC was founded in 1954 by Robert L. Geddes, FAIA, and Melvin Brecher, FAIA, both graduates of the Harvard University Graduate School of Design. Geddes has been Dean of the School of Architecture and Urban Planning at Princeton University since 1965, and Brecher is Associate Professor of Architecture at Drexel University.

George W. Qualls, FAIA, another Harvard graduate, joined the firm in 1956, and Warren W. Cunningham, FAIA, who holds a bachelor of architecture degree from the University of Pennsylvania, joined in 1960.

All of the work of GBQC has been characterized by high design quality, an understanding of the natural and built environment, and social concern. The firm's continuing commitment has been to architectural education as well as to professional development.

As an architectural firm led by educators, GBQC's buildings for higher education have been a prominent part of its work. Its design for the Moore School of

Electrical Engineering, University of Pennsylvania, was the recipient of an AIA Honor Award in 1960 and the Humanities and Social Sciences Center, Southern Illinois University, Carbondale, received an AIA Honor Award in 1977.

Another educational facility, GBQC's Institute for Advanced Study near the Princeton University campus, won the New Jersey Society of Architects/AIA Design Award in 1973 and the Philadelphia Chapter/AIA's Design Award in 1974.

In 1974, GBQC's Science/Academic Building at Beaver College, Glenside, Pa., similarly won Design Awards from both the NJS/AIA and the Philadelphia Chapter/AIA and its design for Stockton State College, Atlantic, N.J., won the 1976 Design Awards from the same two organizations.

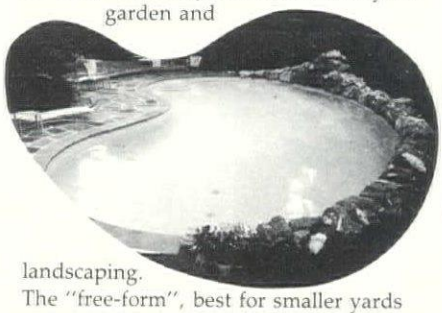
A keen awareness of the importance of planning and urban design also characterizes the work of the firm. This is evident in the firm's master planning work for educational campuses and its city planning projects.

The Civic Plaza, Ice Rink, and Market Street Restoration in Corning, N.Y., designed by GBQC, won the Pennsylvania Society of Architects 1978 Design Award. Its Westchester Public Housing in Westchester, Pa., was given the First Honor Award in 1966 by the U.S. Department of Housing and Urban Development.

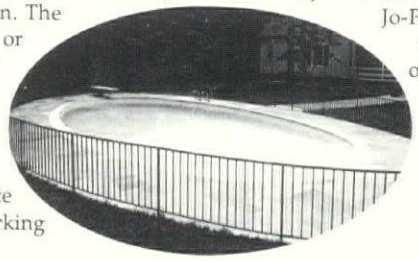
Other award-winning projects of the 65-person firm have included: Penn's Landing Master Plan, Philadelphia; Police Headquarters Building, Philadelphia; Eastwick Urban Renewal Project, Philadelphia; the Public Housing Project, Delaware County, Pa.; Temple Beth Sholom, Manchester, Conn.; The Humanities and Social Sciences Building at the University of Southern Illinois, Carbondale; the Fine Arts Building at Goucher College, Towson, Md.; the United States Embassy in Islamabad, West Pakistan; and First Prize in the Vienna (Austria) International Town Planning Competition.

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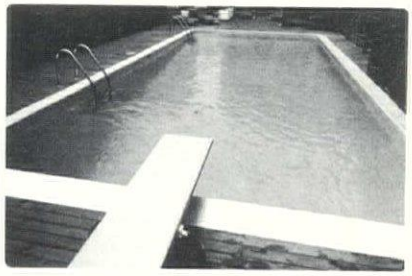
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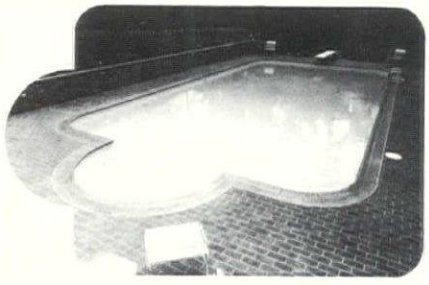
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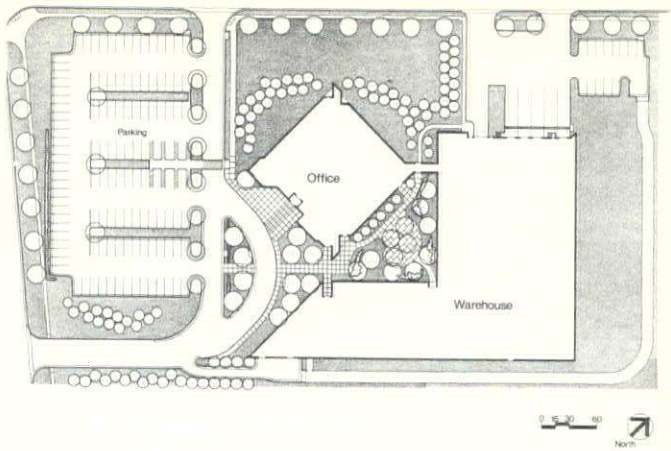
The VVKR Partnership — Architect

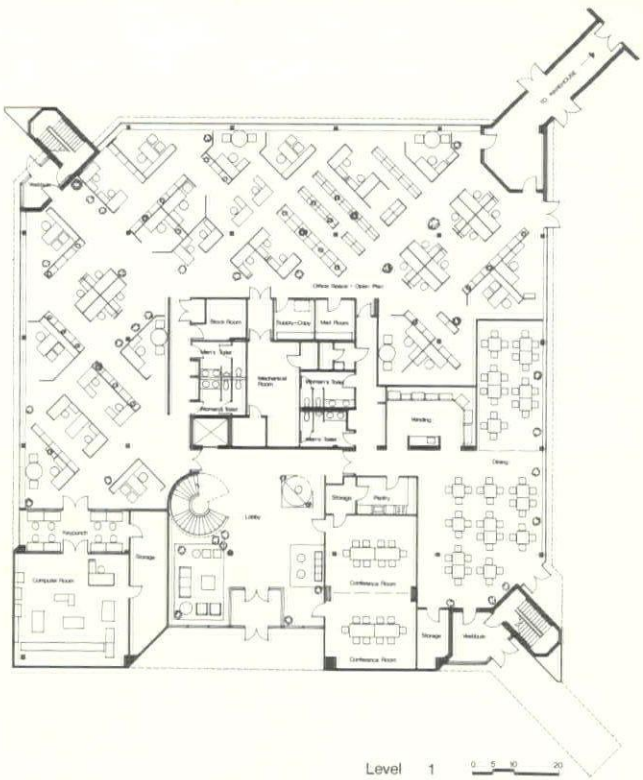
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"Our biggest design problem was creating a building where warehouse space could work together with executive office space without sacrificing efficiency in the warehouse area or aesthetics and amenities in the office area," says William Vosbeck, Partner of the Alexandria-based VVKR Partnership which recently won a Virginia Society AIA Honor Award for their British Aerospace Building in Fairfax County.

The 80,000 square foot building features 50,000 square feet of warehouse space, and the balance is







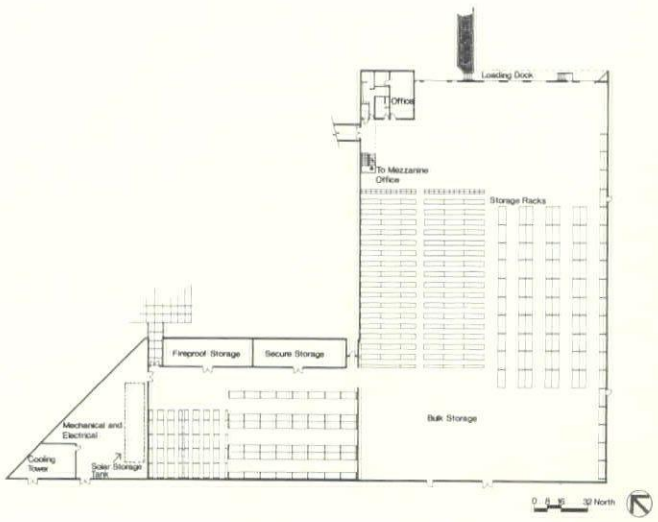


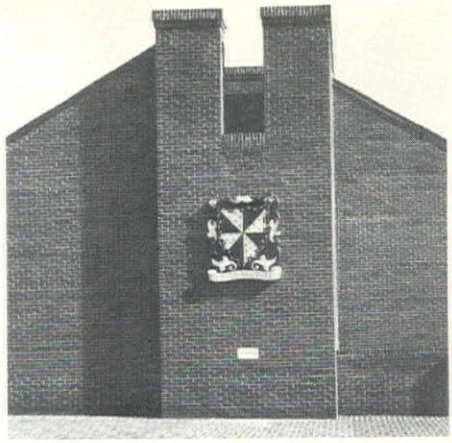
dedicated to office space for The British Aircraft Corporation and Rolls Royce, joint users of the building.

"Futhermore," Vosbeck continues, "we wanted to allow for maximum flexibility for expansion. And we wanted to give the users the option of expanding space from within or by building onto the steel frame and insulated wall panel structure."

To accommodate expansion possibilities for the office area, Vosbeck says that future office needs can be built right over the low-racking area of the warehouse. "Those offices will look over a courtyard atrium. To expand the office space all we'll be faced with is suspending the floor over the low racks of the warehouse. We've created a lighting system in that area of the warehouse that is hung between the racks rather from the ceiling. None of the existing

(Continued on page 48)



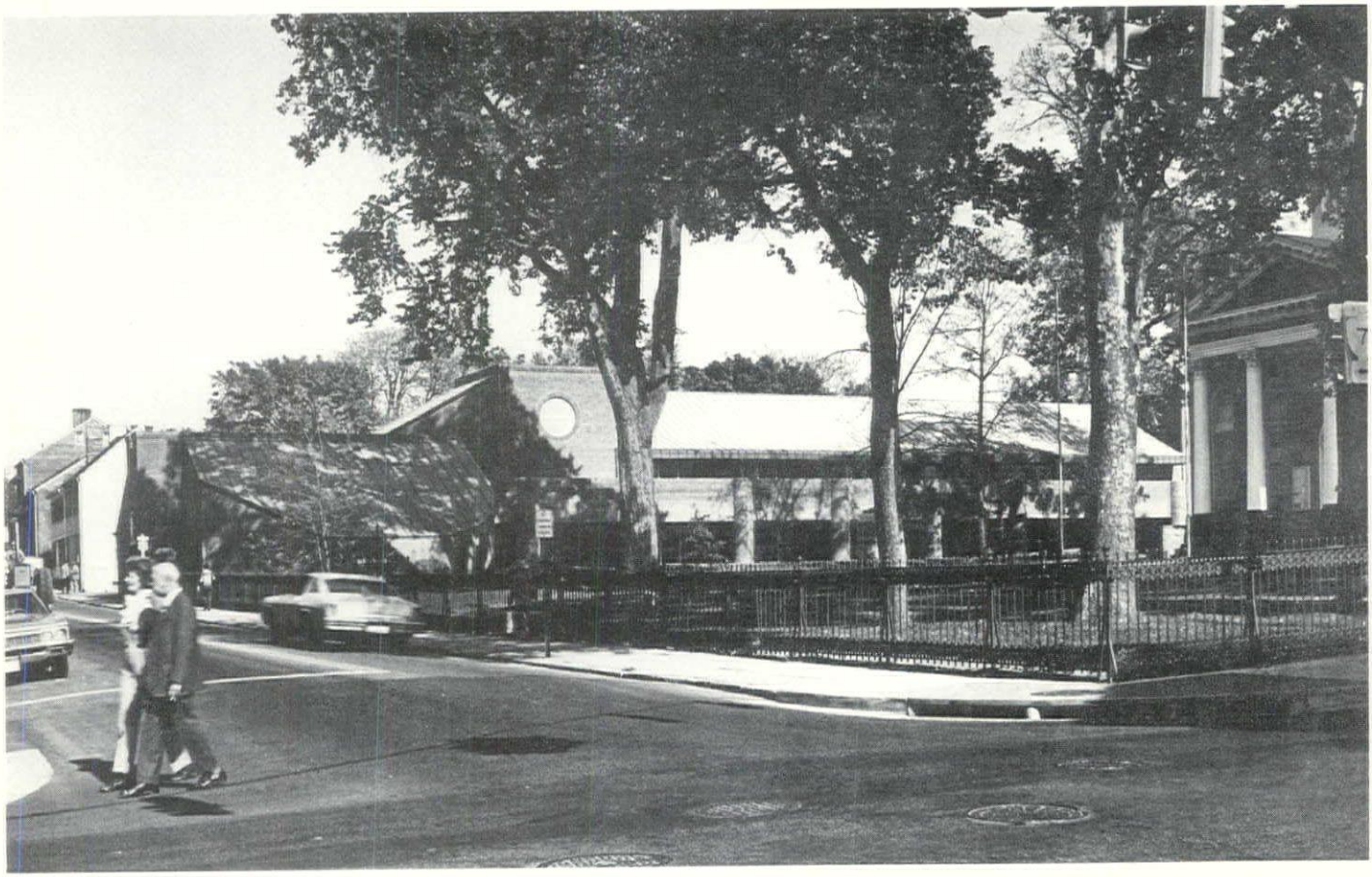


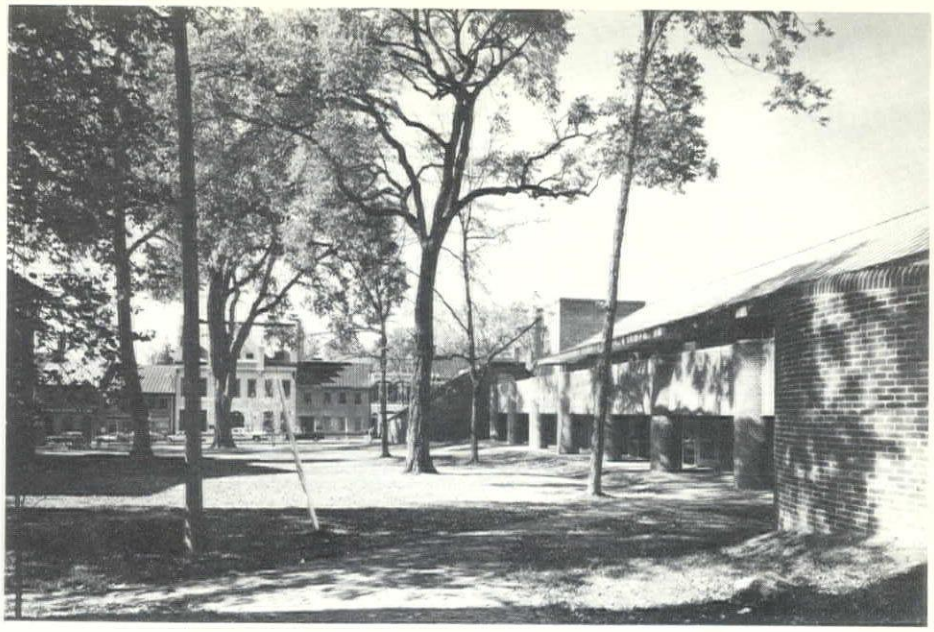
Loudoun County Administration Building

Leesburg

Kamstra, Dickerson & Associates, Inc. — Architect

Landscape Architect, William Potts, ASLA • Mechanical Engineer, Glassman, LaReche • Electrical Engineer, Glassman, LaReche • Structural Engineer, Fortune, Downey, Elliott, Ltd. • Civil Engineer, Dalashmutt Associates • Interior Design, KDA • General Contractor, Whitener and Jackson, Inc. • Photography, Robert Lautman, KDA.





THE LOUDOUN COUNTY OFFICE BUILDING STORY, OR HOW AN HISTORICAL LANDSCAPED AREA MAY BE AS IMPORTANT AS THE BUILDING SITUATED ON IT, OR, IF YOU PREFER: DESIGNING SPACE AS AN ENVIRONMENTAL AND HISTORICAL CONCERN

Although the battle over the design of a new Loudoun County office building hinged around the discussion of a contemporary building in an old and historic district, the main criteria set by the architects was to preserve and renew the Leesburg Courthouse Green as an important Town Space of quality.

In 1973 the Loudoun County government, through a select committee of concerned citizens, selected the firm of Kamstra, Dickerson and Associates of Reston, to replace an existing, condemned hotel building, which for some years had been a County Administration Building and District Courts Building. The wood frame Victorian Hotel had been as much of a landmark to Leesburg and Loudoun County citizens as had been its neighbor, the 1895 Circuit Court Courthouse in the center of the 1759 Courthouse lot.

The citizens were of divided opinions regarding what to do: rebuild the old hotel, copy a Colonial building, move out of town, or build a high rise? Cooler minds prevailed, and the Citizens' Committee, led by John Lewis, a local historian, and Powell Harrison, long time county resident and businessman, and including such diverse persons as a newspaper editor, and an Episcopal priest, worked with KDA and their consultants to devise a contemporary building that was of a proper time and place to work efficiently for the county.

The problems were larger than life: A block that had business, government and residential tenants; a parking lot that intruded into, under and around most of the buildings; an area of trees and grass that had grown neglected, yet was loved by concerned local citizens. Soon the condemned wood frame building was removed, and a gaping excavation was left. What to do? A building to contain 35,000 square feet, larger by three to four times than any existing building, had to be designed.

It took an entire year of approvals and meetings before the design was finally approved and a solution was finally accepted.

The solution was a three-story building, with an entire service floor and County Board Room underground, and two stories of citizen service-oriented departments facing south onto a renovated County Courthouse Green Space. The parking was removed to allow brick pedestrian walks, new sod and lighting to give a sense of place and new found space to County Government, and the Green.

The new building is long and low, and serves as a backdrop and wall to the "new" space, and the building design brought, by its low scale, a sense of prominence to the fine clock tower, and columned porch entrance of the Old Courthouse. Another true Colonial building (the Valley Bank Building, yet to be restored) forms a low-scale wall at the opposite end of the Courthouse Green to encapsulate and contain the space. The opposing two sides of space away from the buildings contained commercial structures of good scale, and two streets, King and Market. A fine metal fence with metal gates adds human scale to the containment of the Green. The space began again to be recognized. New plantings, paint up, fix up, paving and work projects have begun. The space is now used as a focus for "August Court Days," for special outdoor artists' displays, and, during the week, is an enjoyable place to stroll, sit, or stop and admire the many things of a proper space: landscape, scale, detail, and "Life."

The building, facing South, uses overhangs for summer protection and winter heat gain by sun angles. Its utilization of bay window vestibules also saves energy, and provides easy access to citizen use departments: Treasurer, Purchasing, Personnel, Planning, Zoning, Engineering, Commissioner of Revenue, and the County Administrator. All are within easy reach of an active citizenry. New spaces for Recreation, Elderly Citizens, County Attorney and others have also been accommodated into the new building.

The interiors, done by KDA's Interior Design Department under the direction of Nancy Barrett, ASID, used the space concept of movable walls, and open-landscaped furniture for accommodating the diverse needs of the different departments. The inventory and reuse of existing items and a special counter design allowed for substantial savings on furnishings; yet a "new" look to the interiors was evident by opening day.

KDA's Project Architects, Thomas A. Kamstra, A.I.A., and Dorman Wyant, A.I.A., worked with Gerald Finn of Williamsburg to design a wood replica of the Loudoun County Seal for the principal street facade of the County Board Room. Inscribed on the Seal is the County motto: "I byde my time." Considering the five-year period involved from selection of the architect to finalization of the building occupancy, it is an apt motto. Yet few counties can boast the amount of care and concern that went into the reutilization of a historical space by the use of a new, and not an imitation, building. The citizens of Loudoun have a building, but also improved space to brag about. Good space - Inside and Out.

Whitener and Jackson, Inc. of Falls Church was general contractor and handled carpentry.

Subcontractors & Suppliers

Rodgers Excavating Co., Inc., Fairfax, excavating; Steele & Moroney, Inc., Alexandria, piling; Porter & Cole, Inc., Merrifield, concrete contractor; Virginia Concrete, Springfield, concrete supplier; E. F. Cannon & Co., Alexandria, masonry contractor; Al Ciezlik, La Plata, MD, stonework contractor; Arlington Iron Works, Inc., Manassas, steel supplier/erection/joists/roof deck/grating & other roof deck; and Hallmark Iron Works, Inc., Newington, miscellaneous metal & handrails.

Also, Herndon Lumber & Millwork, Herndon, millwork, paneling, cabinets & wood doors; Prospect

(Continued on page 49)



General Office Building

Fairfax County Water Authority

Beery, Rio & Associates — Architect

Landscape Architect, Beery, Rio & Associates • Mechanical Engineer, McDavid Company • Electrical Engineer, McDavid Company • Structural Engineer, Fortune Downey Elliott, Ltd. • Interior Design, Hunter/Miller Associates • General Contractor, Wayne Construction Co., Inc. • Photography, Timothy Danforth.

The General Office Building for the Fairfax County Water Authority brings together the administrative and service functions of the authority from various scattered locations within the county.

To create a sense of inter-relationship within the departments, all three floors open onto a central skylight atrium. By the use of open landscape office planning, a further sense of unification was achieved.

Taking advantage of a sloping site two floors have grade level access allowing easy functional separation of various departments and public access.

The south-facing louvered, skylight is designed to exclude direct summer sun and admit winter sunshine into the atrium which acts as a heat sink for the hydronic heat pump system. It is anticipated that on all but the coldest (20° or less, F.) days, the mechanical system will not require supplemental heat but rather transfer excess heat from the central zone to the perimeter zones.

A 10,000 gallon underground heat storage tank, minimal double-glazed windows, and high "R" value insulation, contribute to the energy efficiency of the building.

Wayne Construction Co., Inc. of Arlington was general contractor and handled concrete work, carpentry and caulking.

Subcontractors & Suppliers

From Springfield were: Bob Banks Construction, Inc., excavating; Virginia Concrete, concrete supplier; E. C. Keyes, masonry supplier & mortar; Southern Iron Works, Inc., steel supplier/joists/roof deck; Davenport Insulation, roof/wall/foundation insulation; Fries, Beall & Sharp Co., hardware supplier; Russell L. Barton Drywall & Plastering, plaster contractor, gypsum board contractor & acoustical treatment; and BACO Co., Inc., plumbing/heating/ventilating/air conditioning contractor.

Alexandria firms were: Newton Asphalt Co. Inc. of Va., paving contractor; E. F. Cannon Construction Co., masonry contractor; Virginia Roofing Corp., built-up roof; Allen Glass Co., Inc., glass, glazing contractor, windows & storefront; Fairfax Tile & Linoleum Co., Inc., resilient tile & carpet; and Virginia Sprinkler Co., Inc., sprinkler contractor.

Others were: Nanaks, Washington, DC, sodding, seeding, etc., landscaping & landscaping contractor; Bowie Steel, Bowie, MD, reinforcing; Hallmark Iron Works, Inc., Newington, miscellaneous metal & handrails; Herndon Lumber & Millwork, Herndon, millwork, paneling, cabinets & wood doors; Prospect Enterprises, Inc., McLean, waterproofing; American Steel Products, Woodbridge, metal doors & frames; Stevens Tile & Marble, Kensington, MD, ceramic tile; American Contractors, Bladensburg, MD, painting contractor & wall covering; Pittsburgh Paints, Pittsburgh, PA, paint supplier/manufacturer; John H. Hampshire, Inc., Baltimore, MD, demountable partitions; Modern School Equipment, Richmond, equipment; Chesapeake Elevator Corp., Laurel, MD, elevators; Coastal Electric Co., Fairfax, electrical contractor; Pel Products, Beltsville, MD, skylights; L & S Distributors, Beltsville, MD, flagpoles & toilet accessories; and Vincent A. Giganti & Associates, Washington, DC, signs.

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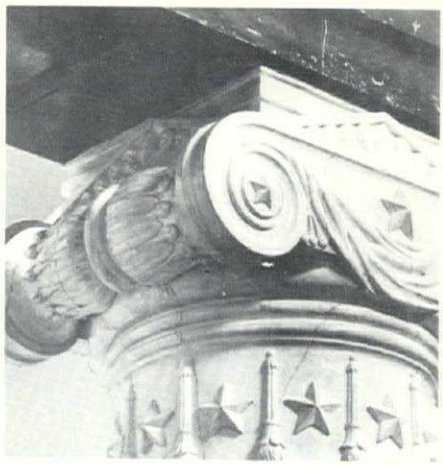
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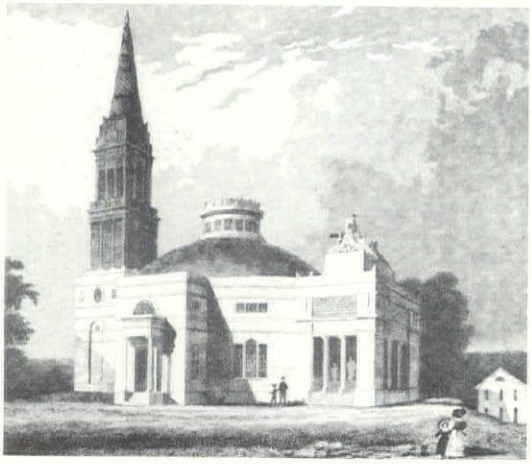
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Restoration of the Monumental Church

Richmond

Glave Newman Anderson & Associates, Inc. — Architect



Mechanical Engineer, Hankins & Anderson • Structural Engineer, W. J. Davis • General Contractor, Conquest Moncure & Dunn, Inc. • Photography, Katherine Weitzel.

This engraving of Monumental Church was published in London in 1831, about 15 years after the church was completed. Yet the engraving shows a steeple that was never erected, and a monument of grander scale than that which was built. The engraving is believed to have been made from Mills' original plans, which have been lost. The view is looking northeast. Broad Street now runs where the foreground figures are standing.

On the day after Christmas in 1811, a young stagehand at the Richmond Theater hoisted a lighted chandelier into the oil-painted scenery between acts of "The Bleeding Nun," a comic-pantomime performed to an audience of 600 Virginians. In the audience were Governor George William Smith, several legislators, and some of the most refined and distinguished citizens of Richmond.

As the second act began, fire fell to the stage from the burning scenery. Panic ensued as flames flashed through the building. Hardly a family in Richmond was left untouched by the disaster that killed more than seventy of the state's leading citizens, including the governor.

At a mass-meeting held in Virginia's capitol building on the next day, Richmonders declared themselves in mourning for four months, during which places of amusement were closed. The city also decided to purchase the theater site so that victims of the fire could "be interred on the spot where they perished, and that the site of the theater be consecrated as the sacred deposit of their bones and ashes."

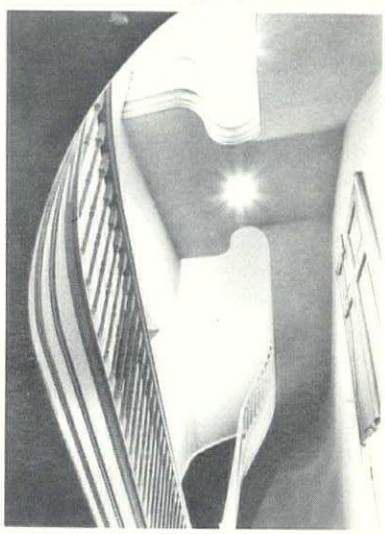
Word of the calamity spread throughout the nation. The U.S. Senate voted to wear black armbands for a month. Preachers all over the land expressed grief from their pulpits. Distant cities communicated resolutions of sympathy.

U.S. Chief Justice John Marshall headed a committee which received contributions to build a church on the burned site as a monument to those who died there. Seven months after the fire, architect Robert Mills a 31-year-old South Carolinian who was the only architectural pupil of Thomas Jefferson, directed the laying of the Monumental Church cornerstone.

Completed in 1814, the church stands in the midst of the Medical College of Virginia campus of Virginia Commonwealth University. Its congregation nearly depleted by 1965, the building was given to the Medical College of Virginia Foundation for use as a chapel. Its use dwindled as its interior deteriorated.

In the latter part of 1978, the church reopened with a new interior, an exact restoration of the Robert Mills design. The MCV Foundation, aided by the Virginia Historic Landmarks Commission, has made

Architects say Mills' staircases at Monumental Church are among the most stunning in the country, for they seem to soar with no visible means of support. They provide access to the gallery.



the building useful again, and in doing so, has completed the first phase of restoring one of the nation's major architectural landmarks.

The design is elegantly simple, and the room can now serve as a place for religious services, symposiums, musical events, plays, displays, and meetings.

"It meets a wide range of needs for a large university auditorium," said Dr. John T. Farrar, a member of the MCV Foundation and a leader in the restoration efforts. The room seats 500 people on the main floor and will accommodate another 200 in the gallery when seats are installed. It's the largest auditorium at VCU.

According to Robert P. Winthrop of Glave Newman Anderson and Associates of Richmond, the church is both architecturally and historically significant. Historically, it is remarkable for the circumstances surrounding its creation, and for its association with Virginia's and the nation's elite. It was also the first major Episcopal church built in Virginia following the American Revolution, when Anglican institutions fell into disrepute. Though it was never called a cathedral, it served for 20 years as the home church of the second Bishop of Virginia, Richard Channing Moore, who was also Monumental's first rector.

Architecturally, it is second in significance only to Thomas Jefferson's Capitol building in Richmond and his Rotunda in Charlottesville, according to Winthrop. Robert Mills, Monumental Church's architect, was the first professional American architect who was trained in this country. He designed the Doric column erected in Baltimore between 1815 and 1829 as a monument to George Washington, then designed the more familiar obelisk in Washington, D.C.–the Washington Monument. He set the style of architecture still evident in the nation's capital with his designs for the Treasury Building, the old Post Office Building, and the Patent Office, which is now the National Portrait Gallery.

The Monumental Church is the grandest and only remaining example of five octagonal, domed churches designed by Mills. All of his churches reflected the liturgical style of the early nineteenth century, when Protestantism emphasized eloquent preaching rather than intricate ritual. The interiors were designed in rotunda or auditorium style to enhance seeing and hearing the preacher, says Winthrop.

When finished in 1814, the white room was flooded with light from the dome's cupola of 22 feet in diameter and 8 feet in height, by eight large clear-glass windows in four walls, and by a window hidden in the apse so that it brilliantly illuminated the preacher, who stood in a very high pulpit. He was flanked by two green columns with yellow capitals, creating a spectacular effect.

Says Winthrop, the building surpasses any other of its period in America in the way it combines the hard edges of its octagonal shape with soft curves of the gallery, shadows from the dome which create an optical illusion that the walls are bowed, and "two of the most spectacular staircases in the country. It is hard to believe that the carpenter could build them."

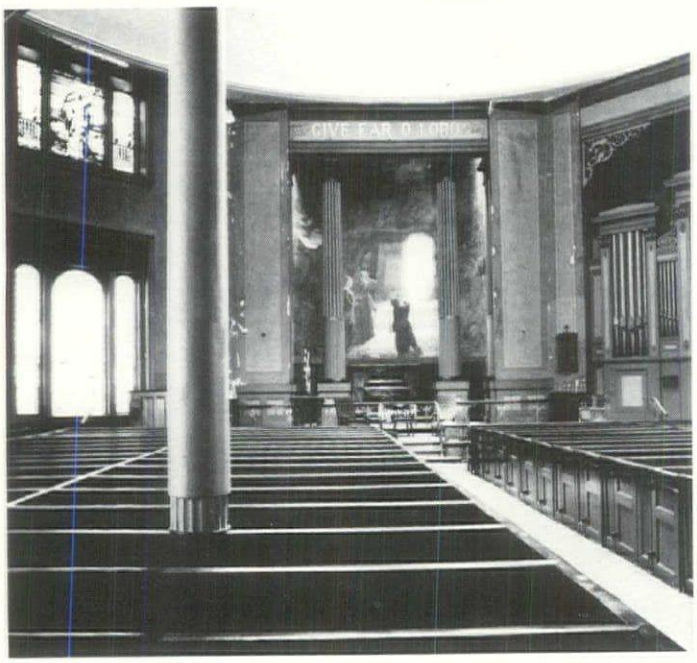
Those staircases, erected in two pairs, are cantilevered from the wall so that they seem to have no visible means of support. They are spiral and meet in a pallet at the top, where they provide access to the gallery, which Mills called the "Grand Settee."

His room, made round to bring the people closer to the pulpit, is capped by an engineering marvel. The dome spans 70 feet, yet its wooden structure is only one foot thick. "A straight steel beam spanning that distance would be three to four feet thick," says Winthrop.

Because the Monumental Church serves dual purposes as a church and as a monument to those who died in the theater fire, it is more ambitious than any of Mills' other churches, before or after it, says Winthrop. A covered structure attached to one side of the church, now used as the Broad Street entrance, is intended as a special place, sacred to memory of the dead. The entire building is ornamented with funerary details and references to the fire. The capitals of two columns feature, as symbols of mourning, upside-down torches, stars, and drapes, surmounted by a flame-like carving on a pediment. Winthrop says these were designed as an effort to create a unique, American ornamentation within the confines of classical architectural style.

But the luminance of Mills' preaching room had become unstylish towards the middle of the century. So its first congregation abandoned it to form St. Paul's Church, four blocks away, in 1845.

(Continued on page 50)



Before restoration, the Monumental Church had not been painted since 1901, the date of its last major alteration which made it a heavy, Victorian space painted in shades of brown rather than the brilliant room that architect Robert Mills had intended. Striking frescoes, which had been added to the dome in watercolors in 1901, were removed by the church congregation when plaster began falling. Monumental's third organ, built in 1850, was moved from the gallery in 1897 to sit in a niche in the northeast wall of the church.



In the restored interior, the horseshoe gallery is again in place, the northeast wall is intact, the highly elevated preaching platform still requires a pulpit to be complete, and the light-flooded interior again reflects Mills' original plans.

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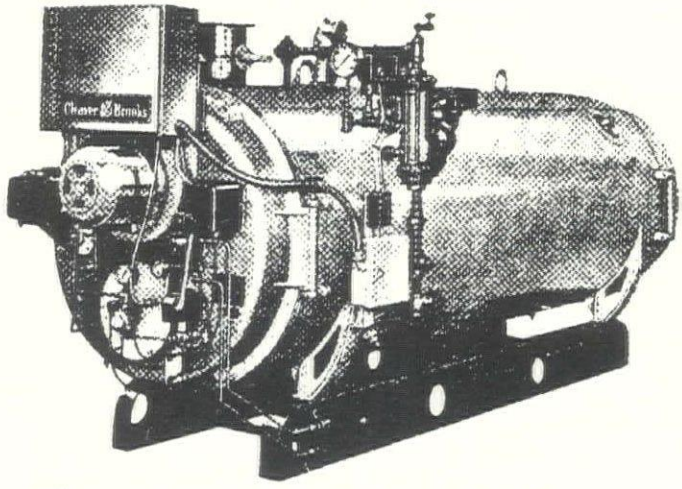
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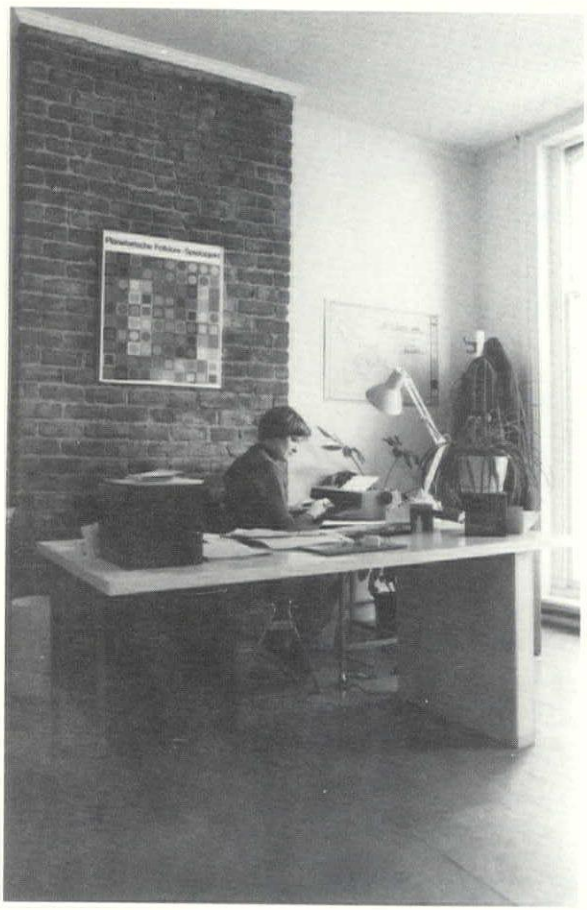
Adaptive Re-Use

Richmond

Chenault & DePasquale, AIA — Architects

Photography by the Architect





Preservation of a very fine architectural edifice, and a desire to unite several groups involved in the arts, were the main objective behind the renovation of these twin attached buildings at 5 and 7 North Sixth Street, renovated at $1.20 per square foot. Since the buildings were vacant for several years before their new occupants proceeded with rehabilitation, the majority of the work was cosmetic, requiring a paint-up, fix-up approach. Where possible, brick walls were also exposed, and minor repairs were made to the heating and electrical systems.

The floor plan of No. 5 is a mirror image to that of No. 7, and the twin formation thus allows for two occupants from front to back on the first floor. The two tenants are the Hand Work Shop which displays its designer crafts merchandise against the exposed brick backdrop, and the Federated Arts Council with Bravo Arts and June Jubilee. Most of the second floor is occupied by the architectural firm of Chenault & DePasquale, AIA, using one of the twin units for studio space; other areas for this firm include a conference room, and a reception room featuring an exposed brick fireplace. Additional tenants in the building include Logos Composition and the Richmond Opera, both complementing the arts activities of the three major occupants.

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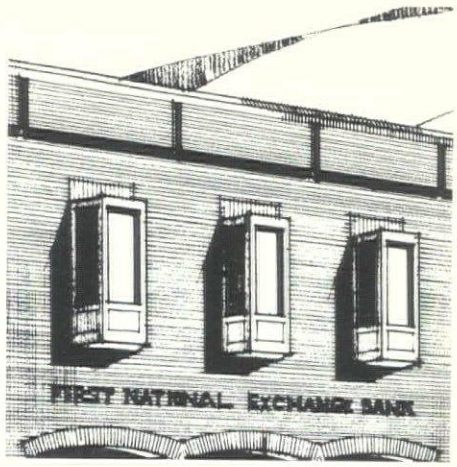
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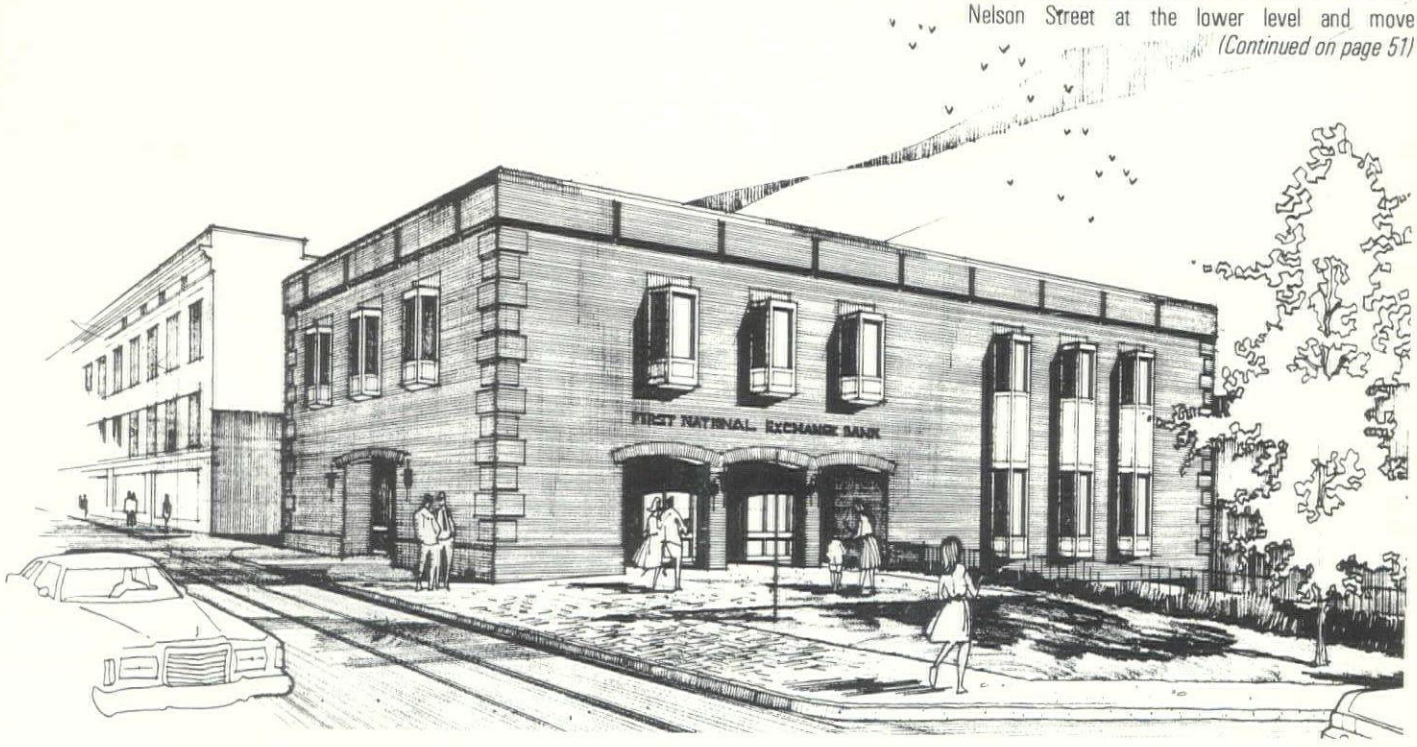
Byron R. Dickson, Jr. — Architect

Landscape Architect, Byron R. Dickson, Jr. • Mechanical Engineer, Lawrence E. Perry & Associates • Electrical Engineer, Lawrence E. Perry & Associates • Structural Engineer, Richard L. Williams • Project Coordinator, The Design/Build Team • Interior Design, Byron R. Dickson, Jr. • General Contractor, Days Construction Co., Inc. • Photography, Byron R. Dickson, Jr.

On January 2nd, 1979, demolition began as the old makes way for the new in downtown Lexington. The new Peoples' Office for the First National Exchange Bank will be located on the site of the existing building at the western corner where Main Street intersects with Nelson Street.

Site circulation will allow vehicles to enter off Nelson Street at the lower level and move

(Continued on page 51)



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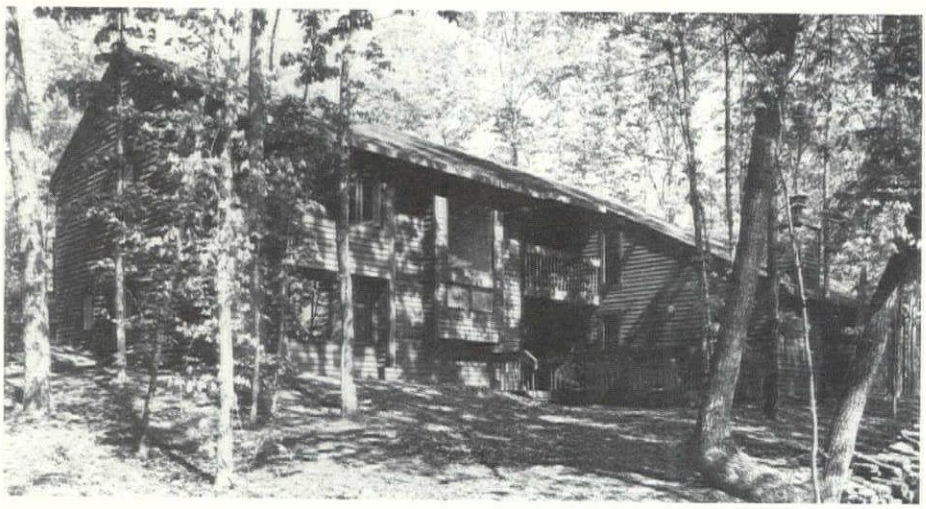
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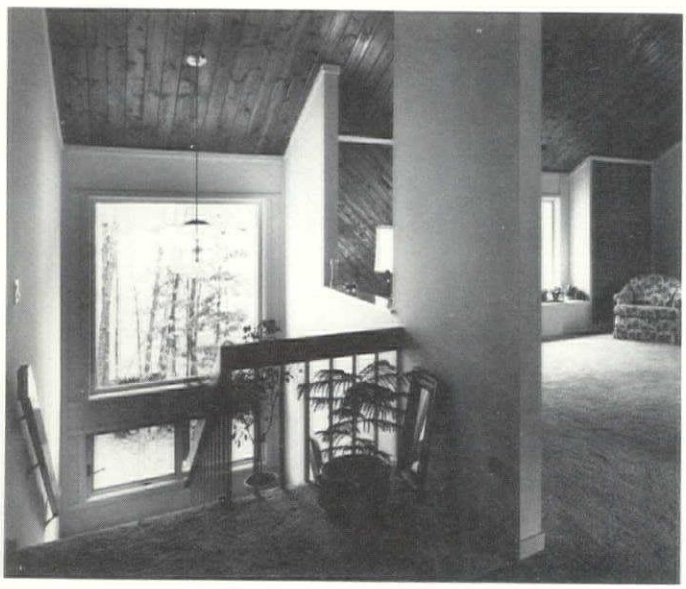
Schweickert Residence

Chesterfield County

Vaughan + Boynton Architecture—Architect



Interior Design, by the owner and Vaughan + Boynton Architecture • General Contractor, Viking Enterprise, Inc. • Photography, Huffman Studio



The Schweickert residence occupies a lot on the west side of a man-made lake in Salisbury Subdivision in Western Chesterfield County. The lot is wooded and slopes eastward to the lake. Development on either side established strict parameters in providing privacy.

The owner had two basic requirements in design of the house: one, the view of the lake was very important and should be taken advantange of wherever possible; two, the structure and site should be as maintenance-free as possible. Of course, other parameters existed, i.e., cost of construction, living patterns, etc.

The topography of site dictated two levels. The upper level consists of formal spaces, family dining and kitchen. The lower level is devoted entirely to family activities. To take advantage of the view, every major space, except the kitchen and the guest bedroom, are oriented to the lake. The existing character of the site was maintained by select cutting of trees, new planting and mulching of all disturbed areas of the site.

To satisfy the owner's desire to make the exterior of the house as maintenance-free as possible, the use of preservative treated wood for exterior sheathing was selected. This choice plus the use of wood foundations resulted in considerable savings over a conventional masonry foundation system and brick exterior finish. Since a significant portion of the lower level was above ground, the entire lower level was constructed of pre-fabricated wood foundation walls, then the entire house was sheathed with

(Continued on page 52)



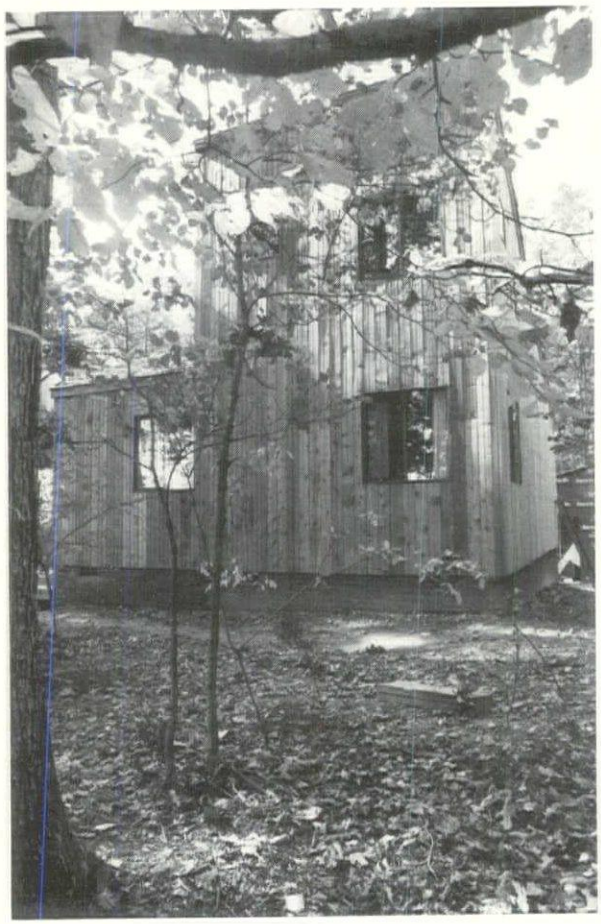
J. William Doswell Family Residence

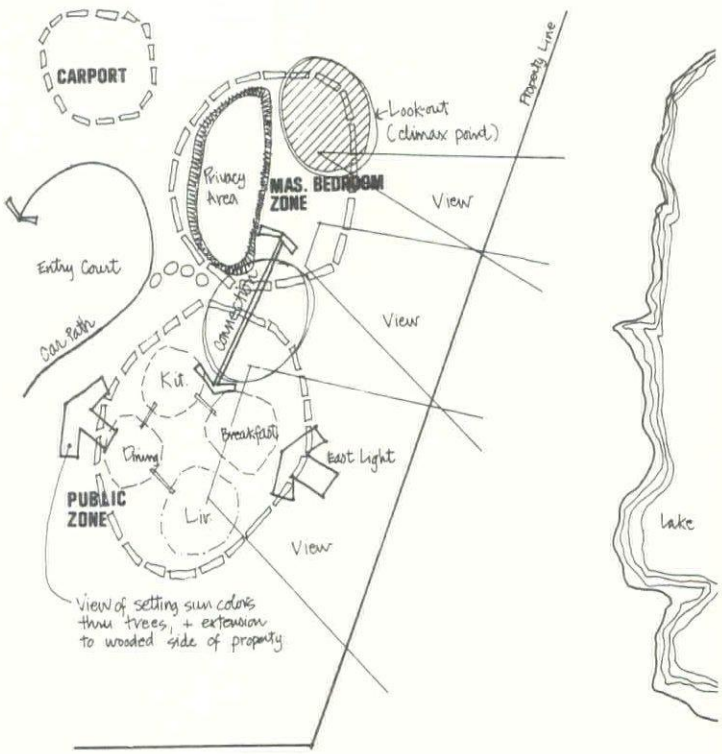
Broad Run, Manakin-Sabot

Chenault & DePasquale, AIA - Architects

Structural Engineer, William J. Davis • General Contractor, R. E. Collier, Inc. • Photography, Chenault & DePasquale, AIA.

The need for a distinct separation between private and public areas, as well as several important site features, were considered as major design determinants for the Doswell Residence. The house provides maximum privacy for a master bedroom wing which is separate from all other living areas. With this in mind, the two-zoned plan was devised which expresses the public and master bedroom areas. A connector links the two zones, and from this connector there is a view of a nearby lake. The





view was enlarged by angling a side wall of the family room at 30 degrees. One enters the house at the connector and can immediately focus on the view of the lake through the family room.

Entrance to the public zone is by way of a gallery leading past a spiral staircase to the living room. Opposite the living room, and with a view of the setting sun through the woods, is the dining room. A breakfast room, with large windows and a barrell-vaulted skylight, is enhanced by early morning east light.

At the other end of the house is the master bedroom zone with sleeping, dressing, and sitting areas. Above the sleeping area is "Bill's Lookout," a get-away place accessed only by a narrow spiral staircase. This location was chosen in order to provide a "climax-point" for the house. As a second story room at the highest point on the property it establishes itself as the anchor, with all other elements, being lower, leading up to it.

Cedar board siding was used to help wed the house to the wooded lot. Also significant items from New Market Farm, the original quarters of the Doswell's ancestors at Doswell, Virginia, have been incorporated into the design.

R.E. Collier, Inc. – Builder, of Richmond was general contractor and handled painting.

Subcontractors & Suppliers
(Richmond firms unless noted)

Brookside Construction Co., excavating; Kevin Vickery, masonry contractor; Biltmore Welding, Ashland, steel erection; Griffith & Griffith, Fife, carpentry; Custom Kitchens, Inc. & Henry Zirkel, cabinets; Murphey's Roofing & Sheet Metal Co., built-up roof; Cedar Roofs of Richmond, Inc., other roofing; W.H. Stovall & Co., Inc., Rusco windows & Arcadia sliding glass doors; Pleasants Hardware, hardware supplier; Earl Knapp Drywall, gypsum board contractor; J.M. Clements, Inc., plumbing/heating contractor; J.L. Minter Electrical Contractors, Inc., electrical contractor; and Colonial Iron Works, Inc., spiral staircase & ornamental gate.

Items from an 18th century farmhouse, incorporated in the design, were supplied by the owner.







University Dormitory Complex

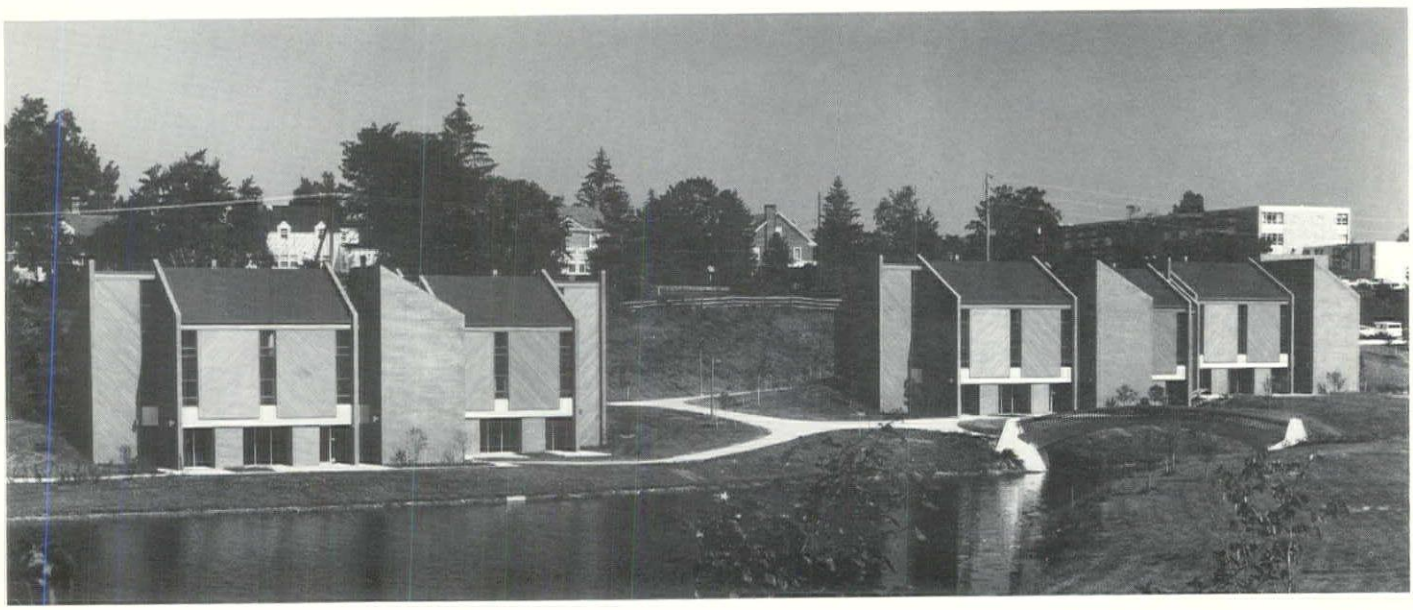
James Madison University, Harrisonburg

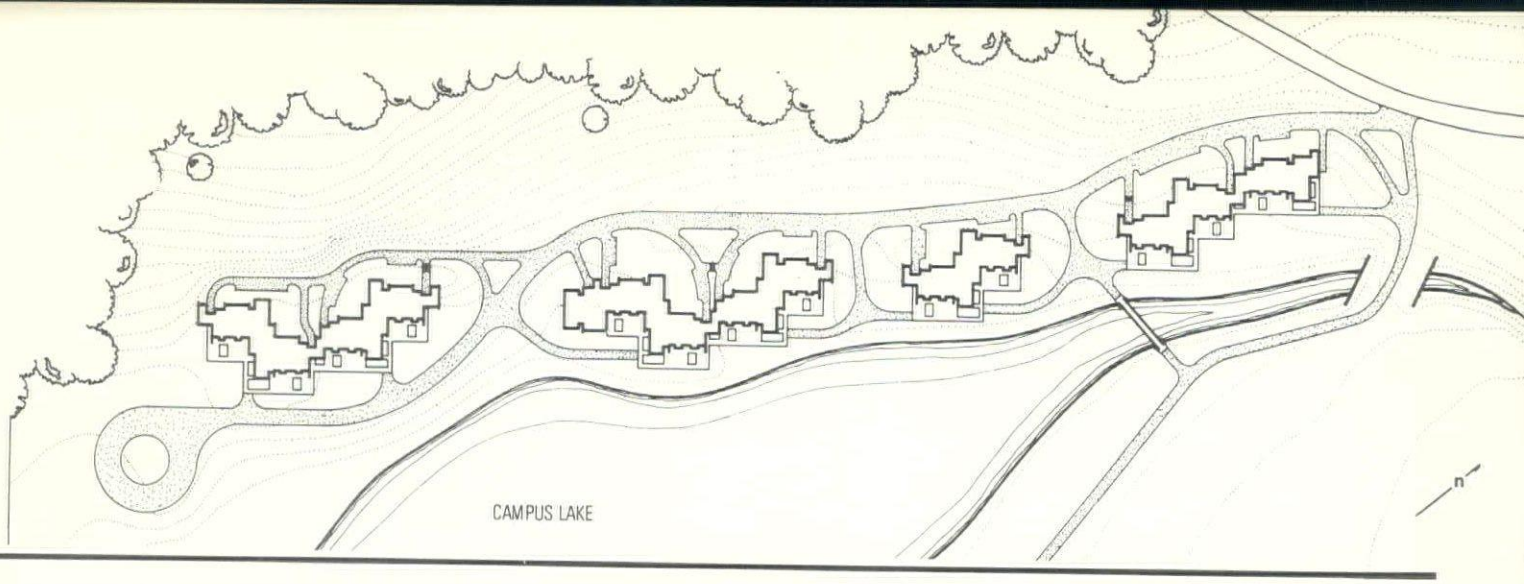
Wright, Jones & Wilkerson—Architect

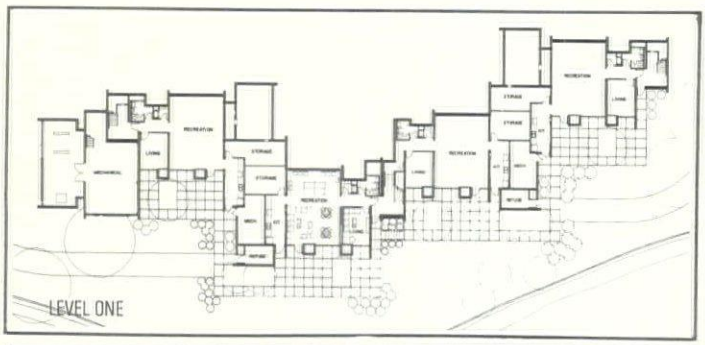
Landscape Architect, Meade Palmer • Mechanical Engineer, Hankins and Anderson, Inc. • Electrical Engineer, Hankins and Anderson, Inc. • Structural Engineer, St. Clair, Callaway & Frye • Interior Design, Wright, Jones & Wilkerson • General Contractor, Nielsen Construction Company, Inc. • Photography, Huffman Studio

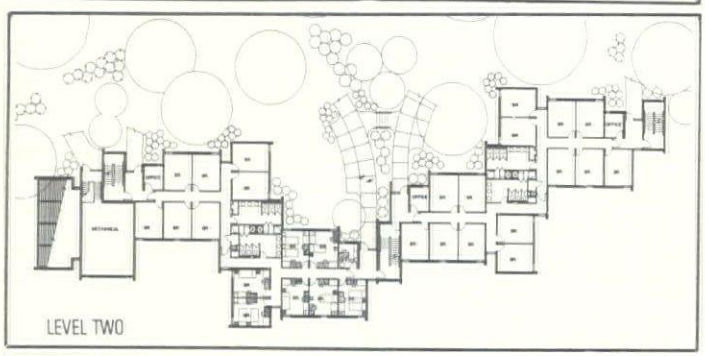
A study by the architect and University of on-campus living facilities, students' desires and students' lifestyles revealed two apparently contradictory needs which are not satisfied in a traditional residence hall living facility design. The first need concerns the students' desire to live together in independent small group-living units with twenty to thirty students. People in general, and students in particular, need living arrangements which enable them to have greater control over all aspects of their living environment and a sense of group identity.

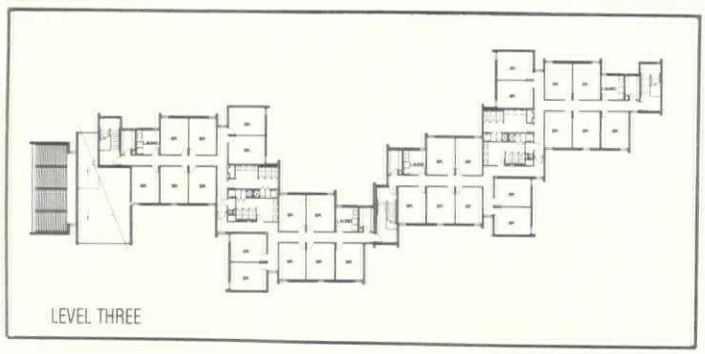
The second need, which in some senses is the antithesis of the first, is the desire for privacy, or in architectural terms, personal space, which affords an individual some degree of solitude and quiet in the midst of a vibrant university campus.



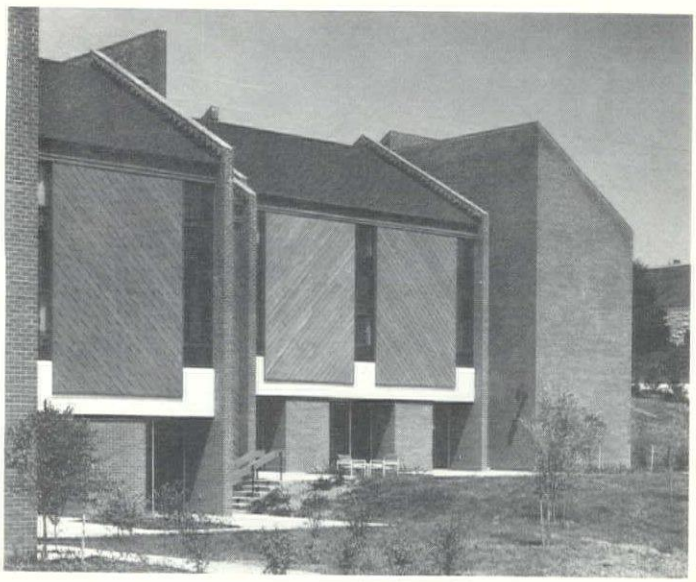










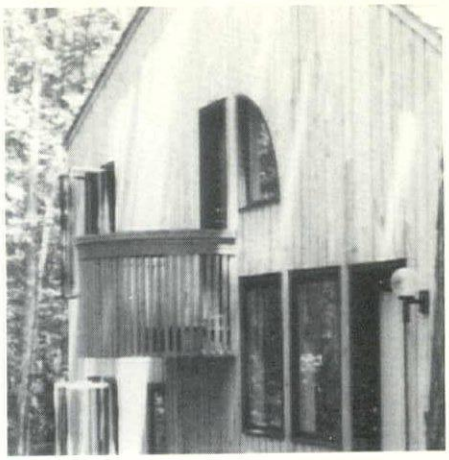


In addition to the strictly human needs or desires, James Madison University, as an educational institution, was also concerned about developing residential facilities which contribute to individual growth and intellectual stimulation outside the classroom. It is strongly believed that a significant part of a university student's education, both academic and personal, will take place in the student's residence hall. However, an effort must be made in design and program to develop an environment which is conducive to study, social interaction, educational programming, the development of close interpersonal relationships, and a sense of group responsibility and identity.

To offer the students an alternative to the traditional residence hall design and to provide for the needs mentioned previously a concept was developed which has been labeled group cluster housing units. The basic concept of the group cluster housing units is to provide units for twenty to thirty students in groups of two to four units in building clusters, with each unit operating independently. The independent units would be designed to facilitate an informal friendly atmosphere conducive to personal growth and development. The design would not permit the buildings to be so large that they become impersonal in character nor so small that they become economically unfeasible. We envision that the independent unit could be used by a variety of student groups for gatherings of both an educational and social nature.

Fraternities and sororities come immediately to mind, but the unit design would function for other groups such as a foreign language house, intended for language majors to help them develop proficiency

(Continued on page 52)

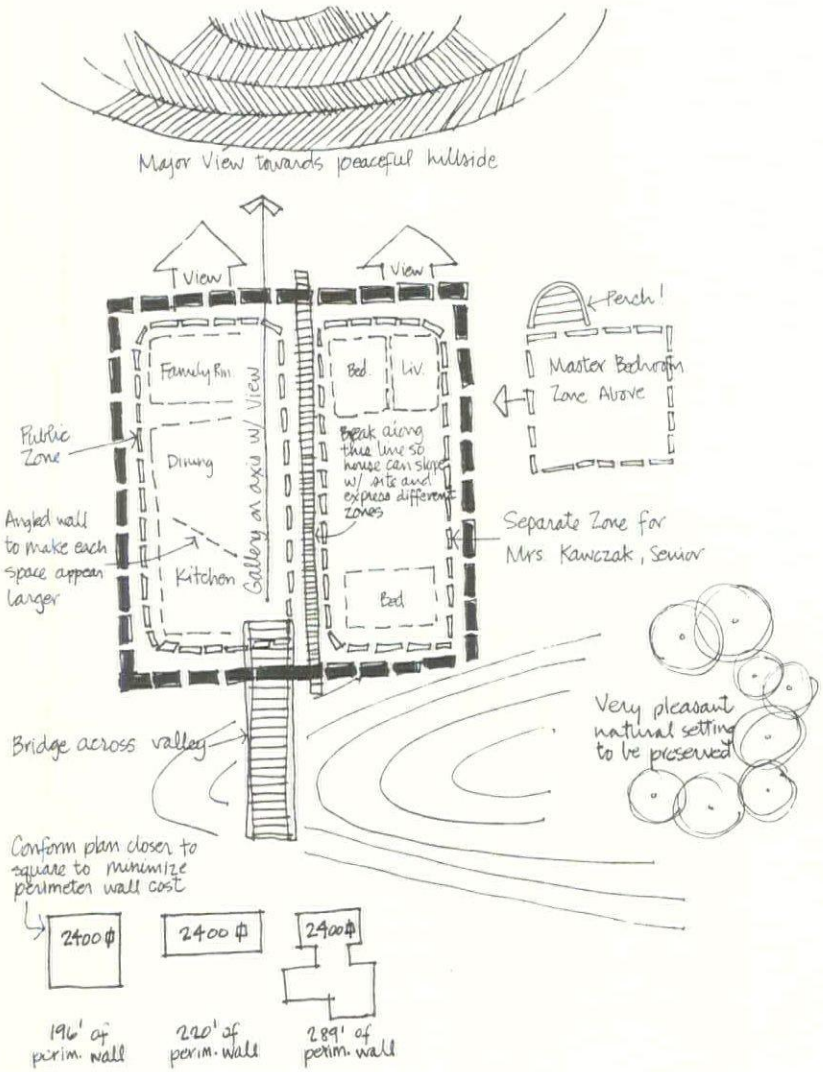


John Kawczak, Jr. Family Residence

Broad Run, Manakin-Sabot

Chenault & DePasquale, AIA — Architects

Structural Engineer, William J. Davis • General Contractor, Donald B. Heslep, Inc. • Photography, Chenault & DePasquale, AIA.





Site characteristics, the individual needs of the Kawczak family, and an emphasis on economical planning were the major design determinants for this 2400 square foot house.

The family room, living room, and master bedroom areas are located to capture the view towards a gently rolling hillside, and the gallery is on axis with a specially shaped window also orienting toward this view. The house was located on a portion of the site that included a "valley"; thus a bridge spans from the driveway area to the house. In order to integrate house and land, the main floor level is broken, stepping down the slope. This break also accentuates and distinguishes the separateness required between the public zone and the zone set aside for Mrs. Kawczak, Senior. The owner's Master Bedroom suite is then located above, with a balcony view into the sloped ceiling family room. At the end of the balcony is an outdoor porch with a view toward the hillside.

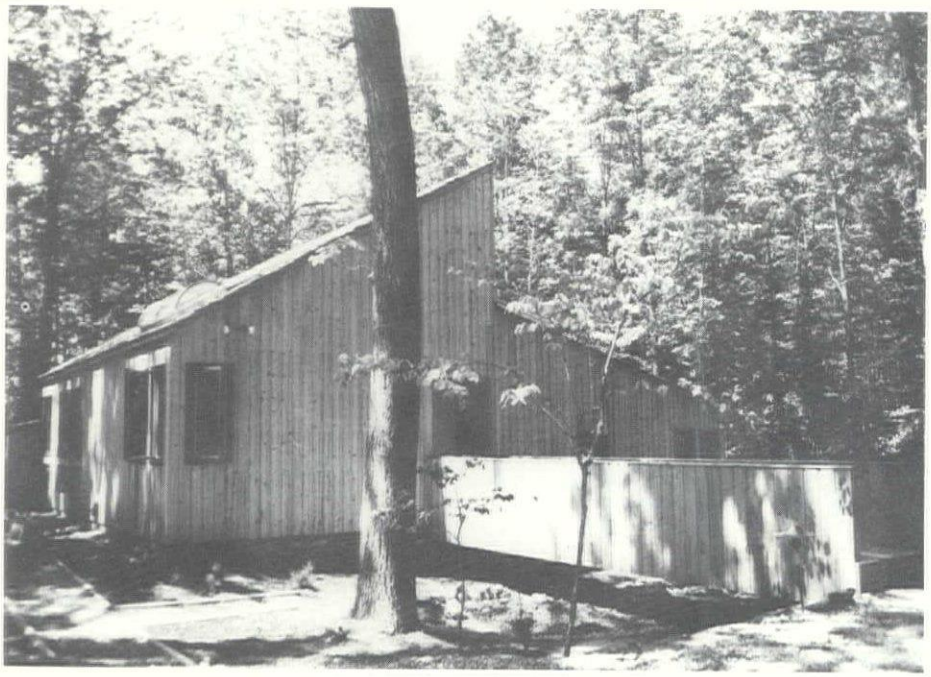
The plan is close to a square in shape in order to minimize the amount of perimeter wall used. A study of varying plan shapes indicated that a square can save as much as 10% in total construction cost over an irregularly shaped plan with 50% more perimeter wall.

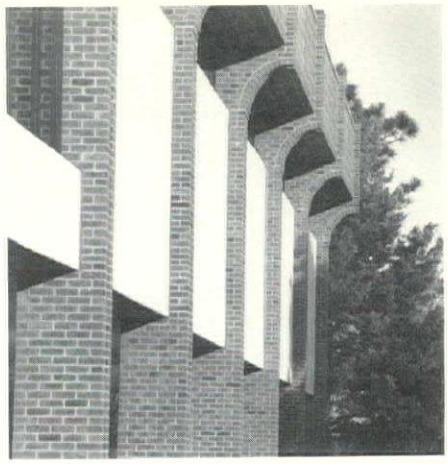
Cedar board siding and cedar shakes were used to help blend the house with its natural surroundings.

Donald B. Heslep, Inc. of Richmond was general contractor and handled carpentry.

Subcontractors & Suppliers
(Richmond firms unless noted)

Vaughan English, Powhatan, excavating; Lone Star Industries, Inc., concrete contractor; R & M Masonry Brick Contractors, masonry supplier; Holmes Steel Co., steel supplier; N.B. Goodwyn, Chesterfield, millwork, wood doors, windows & gypsum board contractor; Powell's Kitchen Center, Inc., Sandston, cabinets; Cedar Roofs of Richmond, Inc., roofing; American Applicators, Inc., wall insulation; Ronald Black, ceramic tile; Louis Stratton, painting contractor; J.M. Clements, Inc., plumbing contractor; Daniel's Heating & Refrigeration Corp., heating/ventilating/air conditioning contractor; and R.C. Dawson Electrical Co., Inc., Hopewell, electrical contractor.





Directory Assistance Building

C & P Telephone Co., Norfolk

Oliver, Smith & Cooke, Ltd. — Architect

Mechanical Engineer, Bowman and Associates, P.C. • Electrical Engineer, Bowman and Associates, P.C. • Structural Engineer, Fraioli-Blum-Yesselman Associates, Inc. • General Contractor, Fox-Sadler Co., Inc. • Photography, Don Teddlie.



The site selected for a new directory assistance bureau building was already in the C&P Telephone Company inventory. It was a city block with a telephone equipment building situated on one end and a small residential lot carved out of a corner at the other end.

Due to the number of employees eventually assigned to both buildings, there was a need for a large parking area; more space than would be available if the new structure were built at grade level. After reviewing a number of alternatives, a decision was made to locate only mechanical and telephone equipment and an entry lobby on the first level and create an 18,500 square foot second level for operational space. This solution permitted an additional 36 parking spaces to be located under the second floor through careful placement of the core and exterior columns. An additional benefit of this approach has been improved security for employees who can reach their cars directly from the lighted first floor entry.

The basic structural system is poured-in-place reinforced concrete columns and beams, with precast double tees for floor and roof members. For non-structural elements, however, an unusual system was employed. Major components, including column facings, fascia and wall panels were pre-fabricated out of brick and a new liquid polymer-based mortar. This mortar has a very high tensile and bonding capacity as well as the usual compressive strength, and allowed the construction of complete pre-fab units at another site in controlled conditions. During construction, these units were delivered, lifted into place and secured using methods similar to those used in precast concrete construction.

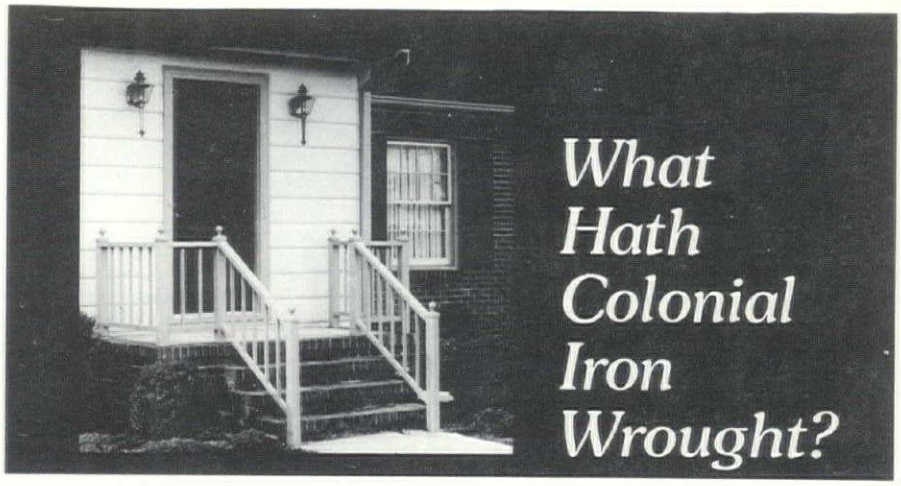
Additional exterior features include contrasting white resinous cement coating over concrete masonry units between each of the columns, and a clerestory area of tinted glass just below roof level. The plastered "ceiling" of the exposed first level is also painted white.

Interior spaces on the second level include primary and support areas for two units of operators. In addition to offices, training rooms and a conference room, significant efforts were made to provide for the best possible working environment within budgetary limitations. For example, large double-insulated exterior glass panels are located in the dining area, and a separate study, a lounge and a quiet room have been provided for the employees during off periods.

Fox-Sadler Company, Inc. of Virginia Beach was general contractor.

Subcontractors & Suppliers
(Virginia Beach firms unless noted)

M. M. Gunter & Son, Inc., earthwork; Forrest Exterminating Service, Inc., soil poisoning; K & L Plumbing & Heating Co., Norfolk, storm drainage; Potter Construction Co., Norfolk, curbs & walks; Contractors Paving Co., base & pavement; Barnum-Bruns Iron Works, Inc., Chesapeake, miscellaneous iron & steel; Weaver Brothers, millwork & doors; Ayers Insulating Co., insulation; Stevens & King Roofing Co., Norfolk, roofing; Seabord Building Supply, metal frames, hardware, toilet partitions & toilet accessories; Walker & Laberge Co., Inc., Norfolk, glass & architectural metal; A. D. Stowe, Inc., Portsmouth, stucco & drywall; Ferrell Linoleum & Tile Co., Inc., Norfolk, hard tile; John H. Hampshire, Inc., Norfolk, acoustical tile; Bay Tile Corp., Portsmouth, resilient tile; New Floors, Inc., carpet; E. Caligari & Son, Inc., Norfolk, paint & wallcovering; Door Engineering Corp., movable partitions; Otis Elevator Co., Norfolk, elevator; Reid Associates, Inc., mechanical and Smith Electric Co., electrical.



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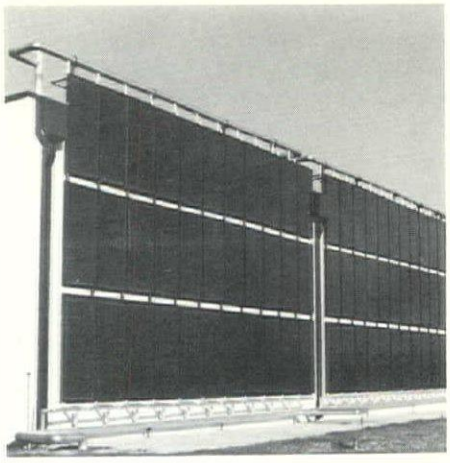
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EASCO Photo Processing Plant

Henrico County

Torrence, Dreelin, Farthing & Buford, Inc. — Architect

Mechanical Engineer, Torrence, Dreelin, Farthing & Buford, Inc. • Electrical Engineer, Torrence, Dreelin, Farthing & Buford, Inc. • Structural Engineer, Torrence, Dreelin, Farthing & Buford, Inc. • Solar Engineer, Torrence, Dreelin, Farthing & Buford, Inc. • General Contractor, Heindl-Evans, Inc. • Photography, Richard P. Hankins, Jr.



EASCO Photo is a film processing company with its headquarters and film developing plant located in Richmond. EASCO pioneered the current, popular sales promotion technique in the Richmond area of overnight film processing. Business grew rapidly, and Mr. Claude Kinder, general manager of EASCO, determined early in 1977 that a new processing plant should be built and completed for occupancy by the summer of 1978. The new facility was to have room for futher growth over the next five years and for a projected second shift of operation. EASCO currently operates a single 6 p.m. to 2 a.m. shift for developing film six nights a week to meet its commitment to overnight service. The company is contemplating adding a daytime shift in the future, which would process film from noncompeting sources such as drugstores in cities not serviced by EASCO.

EASCO engaged the firm of Torrence, Dreelin, Farthing & Buford, Inc., Engineers-Architects, to design the new film processing plant for them. Mr. Kinder indicated a genuine interest in energy conservation and Torrence, Dreelin, Farthing & Buford, Inc. responded with four specific techniques for reducing energy consumption in the building besides the use of roof, wall and floor insulation:

1. A passive solar design for the office windows.
2. The utilization of heat pumps for heating the building when the internal heat gain is insufficent to carry the load.
3. The recovery of heat from exhaust air leaving the film processing equipment, using the heat thus gained to preheat the process water for the film developers.
4. The utilization of an active solar energy system using solar collector panels to further preheat the process water.

The 15,000 sq. ft. building measures 100 feet by 150 feet, with 3000 sq. ft. for offices, 4000 sq. ft. for warehouse space and 8000 sq. feet of plant space. Knock-out panels along the north wall of the plant are provided to facilitate future expansion of the building. The height of the warehouse and plant portions of the building is 21 feet, while the office area height is 15 feet. The insulated block walls have a U-factor of 0.11 and the roof has a U-factor of 0.09. A portion of the roof structure has been strengthened so it can accommodate additional collectors which might be installed if EASCO begins operating two shifts a day.

The double pane insulating windows were left clear to increase the energy collected from the sun during the fall, winter and spring seasons. The design of the window overhangs is such that the windows are unshaded during the winter, but are 97% shaded at 10 a.m. in June when the air conditioning load begins to pick up. This shading of the windows will result in reduced energy consumption for air conditioning all summer long.

Torrence, Dreelin, Farthing & Buford investigated the use of a heat recovery system for the building in detail. This system would have utilized a double bundle reciprocating chiller to recover the heat produced by the equipment, lights and people that was not required to meet wintertime heating needs. This surplus heat would have been used either for heating process water or for heating the building after the equipment had been shut down. An extensive analysis of the cost of this heat recovery system and of the fuel savings to be expected showed it to be financially less attractive than the use of several heat pumps to serve the building along with an oil fired water heater to supplement the solar energy system.

In the photographic process, air must be circulated through each processor whenever it is operating. Then this air must be exhausted to prevent a build-up of ammonia fumes. This exhaust air also removes some of the heat generated by the dryers in the processors. A finned coil installed in the exhaust air, transfers heat to cold water received from the county water mains and delivered, after further heating to the film processors. The payback of the initial investment of $1800 in the heat recovery coil is expected to be repaid in 3.5 years through energy savings based on a one shift operation.

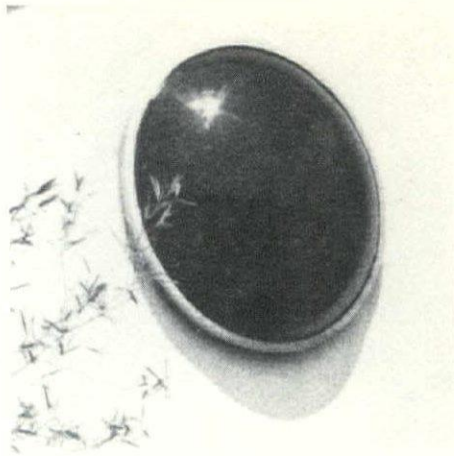
Provision has been made for further heat recovery wherein the hot water from the film processors will be run through a heat exchanger to further preheat the incoming process hot water before the waste water is discharged to the sewer. Provision has also been made for future water and chemical recovery wherein much of the waste water discharged to the sewer can be recovered and reused. This process will also include recovery of much of the bleach and most of the silver in the water. EASCO expects to install this equipment after they have added a second shift.

The solar energy system is used for heating the water consumed by the film processors. The system uses 102 solar collector panels having a gross area of 2142 square feet. These panels were manufactured by Sunworks and furnished by Westinghouse.

The collectors are arranged in 34 columns with three collectors in series in each column. The array is attached in a vertical plane to the south wall of the building with a ten-foot-wide concrete reflector on the ground in front of them.

Manual and computer calculations showed that the match between the output of a vertical collector array and the hot water requirements for the film processors was good and that a vertical array produced a lower payoff period for EASCO than a tilted array. For instance, changing the tilt angle from 90° to 60° would have increased the usable energy from the solar energy system by 8%, but the support structure for the panels would have increased the system cost by $15,000, or nearly 40%. The solar energy system is expected to provide 60% of the

(Continued on page 53)



Fairfield Dental Building

Virginia Beach

The Design Collaborative/Laszlo Aranyi, AIA — Architect

Mechanical Engineer, Bowman & Associates, P.C. • Electrical Engineer, Bowman & Associates, P.C. • Site Engineer, The Design Collaborative/Miller-Fox • Interior Design for Dr. Einhorn, Interscapes • General Contractor, Hudgins Construction Co., Inc. • Photography, Laszlo Aranyi.



This building is located next to one of the newest shopping centers in Virginia Beach in the Kempsville area. In the last few years, this area has been growing at a rapid pace.

Dr. Gerald Einhorn, who is in general dental practice, and Dr. Leroy Pearlman, an orthodontist, decided to construct a building jointly. They have completely separate practices; however, the requirements for construction are similar.

The building is of conventional wood framing on crawl space. If future changes should be required in the piping or wiring, the accessibility of a crawl space will come in handy.

Storing of records and supplies is a universal problem. This problem was solved by providing a full height (8 feet) attic which will accommodate future office expansion.

The exterior of the building consists of cedar siding and synthetic stucco (Dryvit).

Since the land is leased from the shopping center, the owners imposed a height restriction of 21 feet and some visual restriction of having to blend in with the rest of the various style buildings already in existence.

Dr. Einhorn's 2000 square foot office consists of six operatories, two hygienist rooms, private office, laboratory, business office and the waiting room.

Dr. Pearlman's office occupies about 1600 square





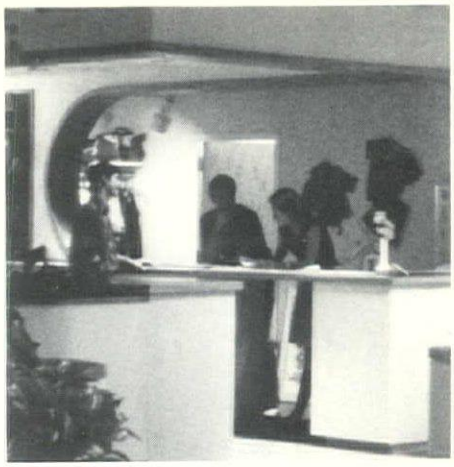
feet, has a single operatory laid out as a half circle, and contains four dental chairs. Other rooms are—a large waiting room, business office, private office, consulting room and laboratory.

The interiors are varied, with sloping ceilings in many of the rooms, and full of natural light, admitted through skylights and clerestory windows.

Hudgins Construction Co., Inc. of Newport News was general contractor and handled carpentry.

Subcontractors & Suppliers
(Norfolk firms unless noted)

Ames & Webb, Inc., asphalt & site concrete; Terminix Co., Inc., Newport News, soil poisoning; Lone Star Industries, Inc., concrete supplier; Stephenson Masonry, Inc., masonry contractor; Blue Roofing & Sheet Metal Works, Hampton, supplied asphalt shingles, membrane roofing, sheetmetal, roof drains & rain diverters; Howard E. Marquart & Co., supplied skylight; Seaboard Building Supply, supplied metal clad entrance doors; Pella Virginia, Inc., supplied Pella windows with bronze glazing; Door Engineering Corp., hardware & toilet accessories; Able Systems, Inc., Tabb, drywall, Dryvit System & insulation; Pompei Tile Co., Inc., Hampton, vinyl asbestos tile; David R. Beck, painting contractor; Addington-Beaman Lumber Co., Inc., lumber, plywood & wood doors; and Potter Construction Corp., curbs & gutters.



Roanoke Athletic Club

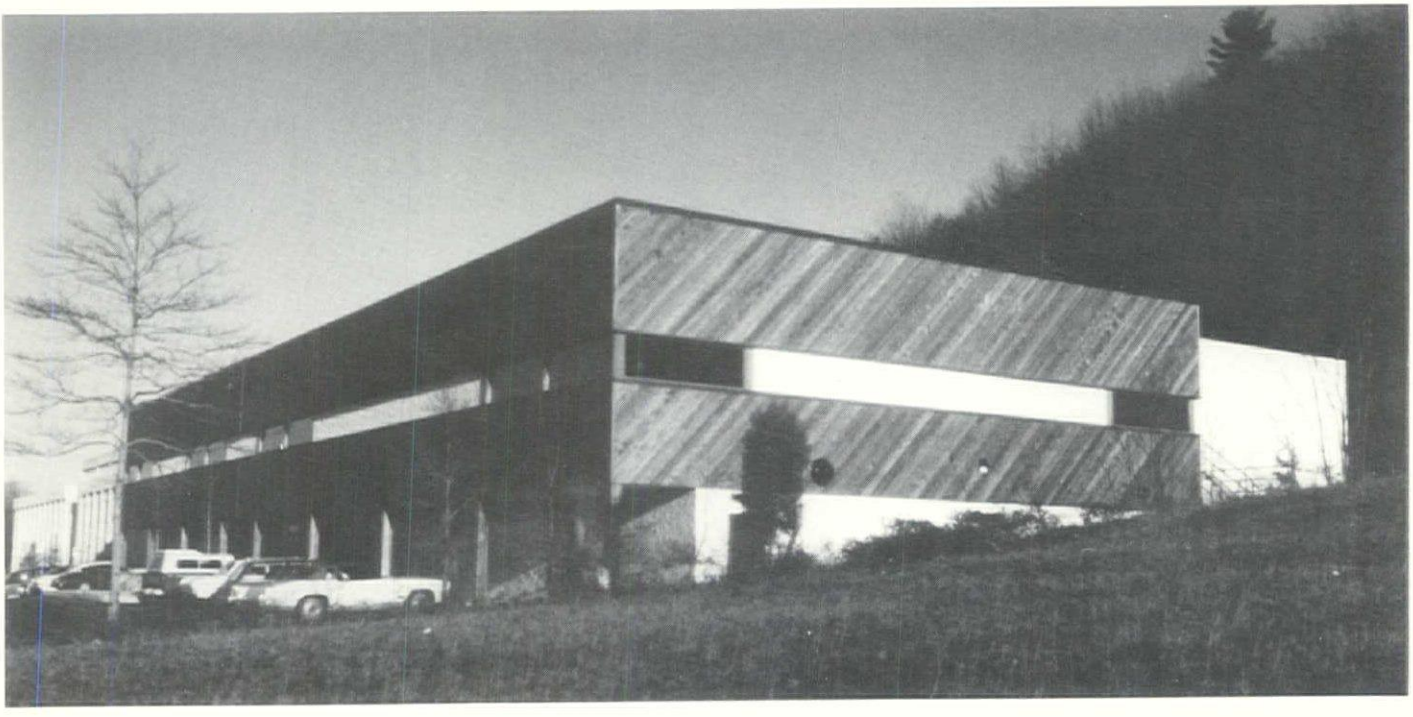
Roanoke

Sherertz, Franklin & Shaffner — Architect

Mechanical Engineer, Sowers, Rodes & Whitescarver • Structural Engineer, Sherertz, Franklin & Shaffner • General Contractor, J. M. Turner & Co., Inc. • Interior Design, SFS Interiors • Photography, Sherertz, Franklin & Shaffner.

Southwest Virginia's answer to the need for better health through physical fitness and recreation in an inviting environment is the new Roanoke Athletic Club.

The new private club located on Starkey Road in Roanoke, is inviting in many ways. Its first and primary attractions are 10 championship racquetball courts and a Nautilus circuit training room containing 13 training stations. Racquetball is America's fastest growing sport and is attractive to the women as



well as the men, therefore, the club is designed with both sexes in mind. Nautilus exercise equipment is scientifically designed for efficiency in fitness programs and is utilized extensively in professional sports training facilities. Other amenities include a free exercise room, where classes can be given; full separate locker room facilities for men and women each with its own whirlpool, steam room, lockers and showers; a one-twelfth mile polyurethane, banked running track; pro shop; food service area, nursery and lounge and observation area for watching play on two glass wall courts.

Three factors influenced the design of the simple rectangular building:

1. Accommodate ten racquetball courts;
2. Make full use of a very limited site; and
3. Tie in visually with the owner's adjacent building.

The exterior facade of the building is a white stucco finish accented with diagonal, western red cedar boards on the upper portion of the structure. Windows in the upper portion allow visual contact with the running track. The exterior's simplicity is contrasted sharply by the interior lobby's use of geometrical circles and triangles. A triangular built-up seating unit is located in front of two glass wall courts. This enables the area to accommodate up to 60 spectators during competition matches. A natural pine floor combined with carpet on the entire first level functions as a directional device leading to major areas of activity and to individual playing courts. Extensive use was made of interior planting and landscaping.

The racquetball court systems are two stories high. Thus, a balcony at the second level is provided to allow spectator viewing from above. This area runs parallel to the running track and is designed to allow ample room for viewing without interfering with track activity.

For the ever-growing physical fitness conscious of the Roanoke Valley, the Roanoke Athletic Club has proven to be a long awaited haven for the members' recreational desires and needs.

J. M. Turner & Co., Inc. of Salem was general contractor and handled foundations, concrete work, carpentry and caulking.

Subcontractors & Suppliers
(Roanoke firms unless noted)

Thomas Brothers, Inc., Salem, excavating; L. H. Sawyer Paving Co., Inc., Salem, paving contractor; Valley Steel Corp., Salem, reinforcing; Salem Ready Mix Concrete, Inc., concrete supplier; B & B Masonry, Vinton, masonry supplier; Structural Steel Co., Inc., steel supplier/joists/roof deck, miscellaneous metal & handrails; A. A. Ryan & Co., Vinton, steel erection; South Roanoke Lumber Co., millwork, cabinets & wood doors; Valley Roofing Corp., waterproofing, built-up roof, roof insulation & sheet metal; and A & H Contractors, Inc., wall insulation, plaster contractor, gypsum board contractor, acoustical treatment & special wall finish.

Also, Marion Glass & Aluminum, Inc., Salem, glass & windows; Skyline Paint & Hardware, Inc., metal doors & frames & hardware supplier; Botetourt Tile, ceramic tile; Costen Floors, Inc., Richmond, special flooring; Roger Shell, painting contractor; Pittsburgh Paint, Pittsburgh PA, paint manufacturer; Martin Surfacing & Decking, Inc., Baltimore, MD, specialties, racquetball courts & running track; Magic City Sprinkler, Inc., sprinkler contractor; Bud Weaver Heating & Air Conditioning, plumbing fixture supplier & plumbing/heating/ventilating/air conditioning contractor; Statewide Electrical Contractors, lighting fixtures/electrical equipment supplier & electrical contractor; and Gazebo, interior landscaping.



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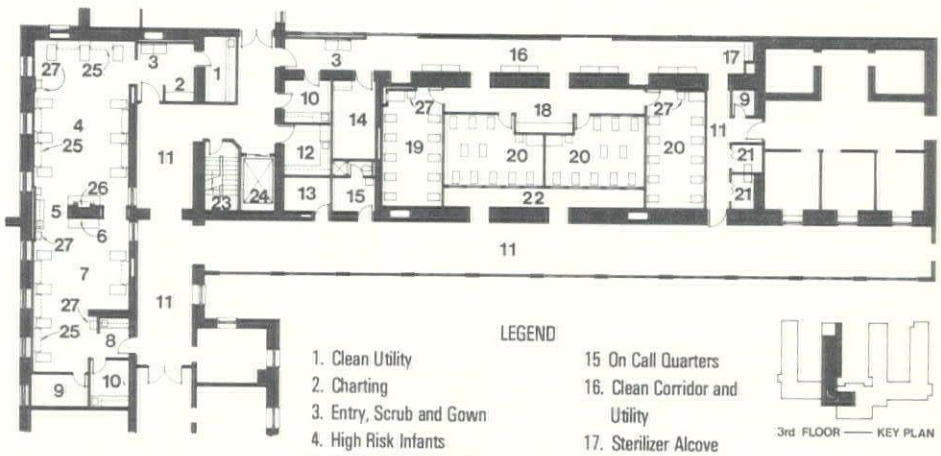
Williams and Tazewell & Associates, Inc. — Architect

Mechanical Engineer, Chandler & Gibson • Electrical Engineer, Chandler & Gibson • Structural Engineer, Williams and Tazewell & Associates, Inc. • General Contractor, Meredith Construction Co., Inc. • Photography, Ronald Maratea Photography.

The scene could be a cliche' of Americana – mother and newborn baby in a rocking chair in front of the fireplace with father standing proudly beside. But the fact that it is set in a brand new Neonatal Intensive Care Unit in a Navy Hospital makes it a unique picture instead. Even unique may be the wrong word now because the scene takes place everyday at the Naval Regional Medical Center in Portsmouth, where the architects and Navy planners managed to retain an old fireplace while moderizing the Newborn Nursery and Neonatal Intensive Care Unit in a pre-Civil War section of the hospital complex.

The Naval Regional Medical Center in Portsmouth administers health care to over 350,000 beneficiaries in the Tidewater area and serves as a referral center for a tri-service (Army, Navy and Marine Corps, and Air Force) region. Operating out of 30 buildings on 100 acres previously known as Fort Nelson, the hospital continues to use "Building One," a pre-Civil War structure, to house inpatient facilities for pediatrics, psychiatry and obstetrics as well as outpatient facilities for pediatrics, psychiatry and dermatology. The Obstetrical Department has recorded between 350 to 400 live births per month for the last several years.

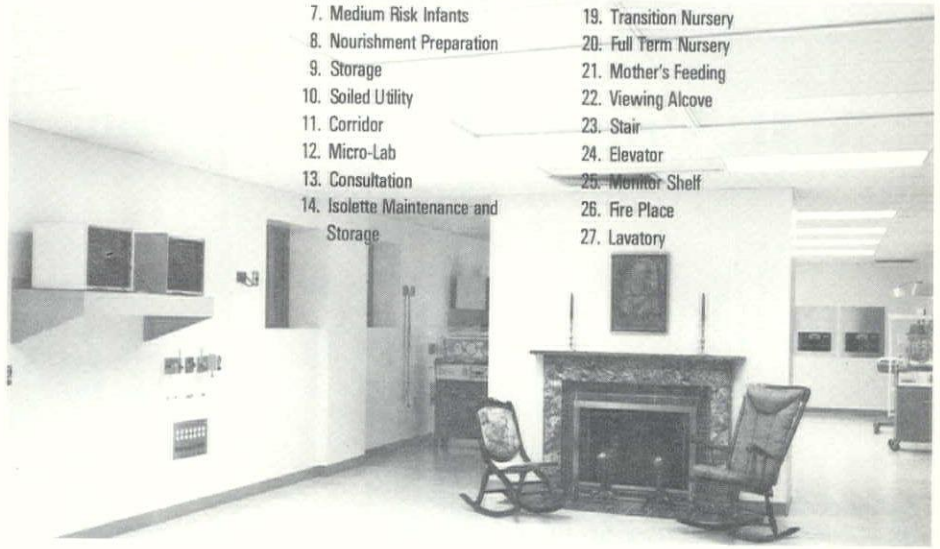
Construction of "Building One" was begun in 1827 using plans prepared by John Haviland, a Philadelphia architect, and was completed in three years at a cost of $270,000. It is listed in the State and Federal Registry of Historic Structures. Originally a four-story structure with a capacity of 300 to 500 beds, the building resembles a Greek temple approached by 20 stone steps and fronted with 10 stone Doric columns. Constructed of some 750,000 brick, hammer dressed granite, hand chiseled Virginia



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3rd FLOOR — KEY PLAN



free stone, iron sills and lintels, Welsh slate roofs and well seasoned timber, the building boasts load bearing walls as thick as 4½ feet. The building was originally heated by wood burning stoves and large fireplaces.

The hospital has rendered continuous service except for three years from 1907 through 1909 when the original building was expanded to a capacity of 1,405 beds. Two additional wings were added as well as a dome over the center section behind the columned portico containing a modern operating room.

Designed by Williams and Tazewell & Associates, Inc. of Norfolk, modernization of the third floor of the original structure to provide a 9,362 sq. ft. Newborn Nursery and Neonatal Intensive Care Unit began in July 1977. Since the existing nursery suite (one room of which served as an Intensive Care Nursery) occupied all of the area which would eventually be the 40 bed Newborn Nursery alone, the construction had to be incremental to prevent closure of all nursery facilities in the hospital. The area slated for use as the Neonatal Intensive Care Unit was occupied by on-call quarters, nurse lounge and toilet and an abandoned radiology room. This area was chosen for modernization first. Upon its completion the existing nursery was abandoned. The new Neonatal Intensive Care Unit was used for high and intermediate risk infants while healthy infants were permitted to room-in with their mothers. The entire construction period was one year of which four months of rooming-in were required during completion of the Newborn Nursery suite.

The heart of the Intensive Care Unit is the original fireplace, complete with marble mantel and brick hearth, which was retained to provide a more relaxing atmosphere in this highly technical unit. Parents are encouraged to spend time with their infants around the fireplace, and its existence contributes to developing the parent-child relationship in a home-like, though highly controlled, environment. Viewing windows were also provided to allow the parents as much visual access to the infants as possible.

The Neonatal Intensive Care Unit consists of 15 beds, nine of which are high risk. The unit is entered through a central gown and scrub station. In addition, hand washing lavatories are provided throughout to promote frequent staff hand washing. Utility and medication preparation spaces are self-contained within the unit. A centralized physiological monitoring system is located adjacent to the charting desk in the center of the unit. There is also extensive shelving at each infant station for bedside monitoring. Limited space required mounting the medical gas and power outlets and monitor shelves at eye level at each infant station instead of in the face of a base cabinet as usual. This arrangement has provided greater accessibility to each infant station.

The Newborn Nursery Suite consists of a 10-bed transition nursery and three 10-bed full term nursery rooms. Supporting the suite are two private feeding rooms for mothers, nurse charting and control spaces, and a restricted, clean support corridor which also acts as a clean utility space. A scrub station is provided at the staff entrance to the suite and each nursery room is equipped with a hand washing lavatory. Infants may be viewed from an alcove which is adjacent to a main public corridor and serves all four nursery rooms. The height of the windows above the finished floor has been varied to accommodate both parents and siblings.

The Neonatal Intensive Care Unit and the Newborn Nursery Suite are separated by a corridor which is a main pedestrian circulation element in the hospital and thus had to be retained. It was relocated, however, for proper sizing of the ICU. In the process, space between the units was created for shared support facilities including a micro-lab (bloodgas), an on-call room, and an isolette maintenance and storage room. The existence of the corridor separating the two units actually simplified phasing of the construction.

There were several engineering problems to be solved in the modernization. Structurally the thick load bearing stone and brick walls had to be penetrated in several locations and long lengths of wall in the Intensive Care Unit were removed entirely. This was accomplished by using needle beams and wide flange lintel sections. The additional electrical load of the Intensive Care unit and its sophisticated life support equipment exceeded the capacity of the existing emergency generator, so a new 50 KW generator was installed. The environmental conditioning requirements of both the Intensive Care Unit and the Nursery suite dictated two completely new air conditioning systems. The air handling equipment was installed in the attics above each unit, a very tight fit with precise installation requirements. Additional condensing units were installed on the roof to accommodate both systems.

Finally, since the entire buildings is on the historic register scheduled for preservation, the exterior could not be altered. In the Intensive Care Unit, however, patient care services fill the head wall at each window station. Consequently, the windows were secured and sealed, blacked out, and insulated. The spaces were then blocked up except for accommodations for the patient care services.

NOTE: The opinions contained herein are the private ones of the authors and are not construed as official or reflecting the views of the Navy Department or Naval Service at large.

Meredith Construction Co., Inc. of Norfolk was general contractor.

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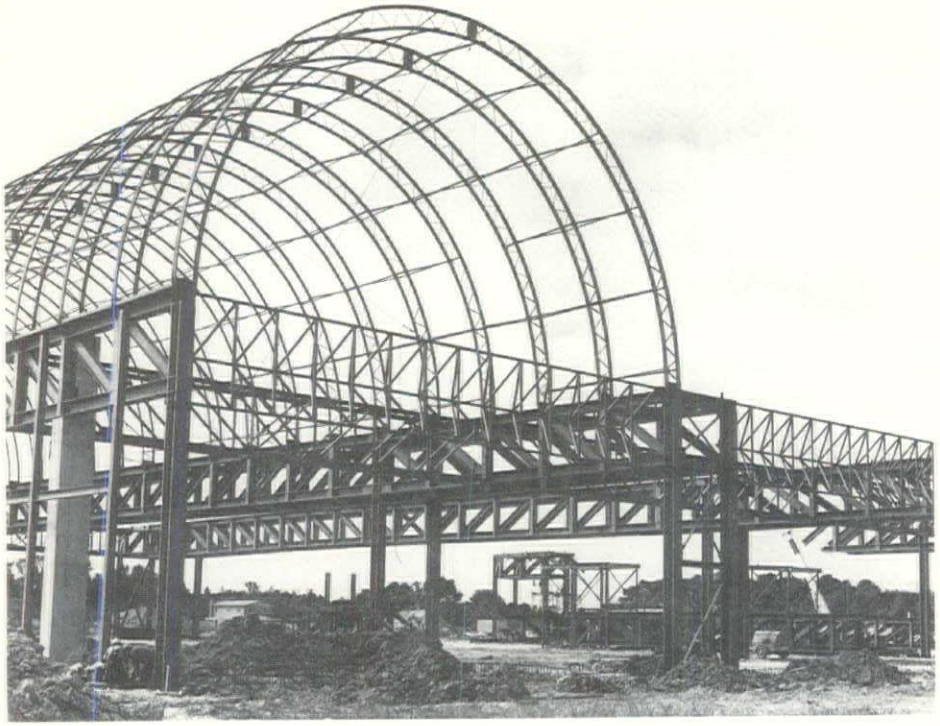
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Steel framework begins to take shape for the new Virginia Beach Arts and Conference Center.

Bethlehem Steel Supplies Structural Shapes for Virginia Beach Facility

• The unique design of Virginia Beach's $16 million Arts and Conference Center, scheduled for completion and occupancy in the spring of 1980, is beginning to take shape on a 20-acre site just seven blocks west of the city's three-mile Atlantic Ocean beachfront section that contains hotels and motels with over 7,000 first-class accommodations.

As of now, only the steel framework is silhouetted against the ocean sky, but the impact is both exciting and dramatic. A series of ten barrel vaults, each one approximately 60 feet above ground at the high point of its curvature, will eventually grace the skyline.

Each barrel vault is 60 feet across and up to 240 feet in length. The ten parallel units rest on steel trusses parallel with the vaults. The trusses consist of a series of box units, each 8 feet deep and about 9-½ feet wide. The steel truss units are supported by 20-foot-high steel columns, two sets of which are located at each end.

Due to the unique design and construction, the structure offers a 375 x 215-foot exhibition hall that has a clear span of 170 feet between columns. The finished inside maximum height of the exhibition hall, made possible by the barrel vault design, is 56 feet. The center's overall dimensions are 215 x 670 feet.

In addition to the exhibition hall, the center features an auditorium with seating for 1,000, up to seven smaller individual meeting rooms, a gallery – or "Galleria" as it will be called – lounges, an attractive garden court and entrance areas that provide spacious and easy ingress and egress.

Owned by the City of Virginia Beach, the new center's construction is proceeding close to schedule under the watchful eye of James L. Frantz, project manager, who said that steelwork for the building should be virtually complete by the first quarter of 1979.

Bethlehem Steel Corporation is supplying over 2,000 tons of structural shapes for the project.

By late October, the foundation work was basically complete in the Exhibition Hall area and about 75 percent complete in the theater area. Frantz explained that work in the theater area was slowed somewhat by the orchestra pit, which "is 25 feet down into the ground and had to be well-pointed."

In all, about 50 workers are busily engaged in construction activities on the site. Basic Construction Company of Newport News is the general contractor. The structural engineer is Abiouness, Cross and Bradshaw, Inc. of Norfolk. Montague-Betts Company, Inc. of Lynchburg is the steel fabricator/erector and the associated architects are Walsh & Ashe Associates of Virginia Beach and Odell Associates, Inc. of Charlotte, N.C.

NAWIC
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National Association of Women In Construction is composed of women who are involved in the Construction Industry. The objects of this organization are:

1. Unite for mutual benefit, women who are actively employed in various phases of the Construction Industry;
2. To encourage cooperation and better understanding among them;
3. To promote fellowship and good will among members of the organization; and
4. To promote education and service to the Construction Industry.

NAWIC is a self-governing, non-profit, non-partisan and non-sectarian group. It is an international organization with three chapters in Canada and more than 200 in the United States. It has grown in 25 years to a membership which exceeds 7,000.

The Richmond Chapter currently has 45 members. It has monthly meetings with programs arranged to familiarize members with the entire concept of construction. Various educational programs are offered to members and the Chapter also sponsors programs for the general public.

For further information, call Richmond Chapter president, Jeanne James at 272-7585. She will be glad to go into more detail or answer any questions.

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Alexandria Decorative Arts On Display in Alexandria

• "Made in Alexandria," an exhibit of 18th and 19th century decorative arts by Alexandria, Virginia craftsmen, opened at the George Washington Bicentennial Center in Alexandria on February 3 and continues through September 3. The exhibit surveys more than 60 pieces of needlework, pottery, silver and folk art owned or created by Alexandrians from 1790-1860.

On display for the first time will be a silver bowl owned by the Marsteller family, a milk pan by ceramic artist S.C. Milburn, a needlework picture, a rare signed piece by potter John Swann and a model ship.

Among the objects, which have been borrowed from private and public collections, are a large trunk from Gadsby's Tavern labled by an Alexandria trunkmaker, a Windsor chair belonging to George Mason's family, a footstool embroidered by Nellie Custis, a small trunk owned by Robert E. Lee's family and an empire style pier table.

The exhibit highlights fine arts and folk arts commonly found in 18th and 19th century homes. The works of silversmiths Adam Lynn and John Adam; potters Henry Piercy, the Milburn family, John Swann; and furniture craftsmen William and John Muir and W. Bradley and Sons will be represented. In addition, there will be a few pieces associated with George Washington, who owned a home and conducted business in Alexandria.

The decorative arts of Alexandria are representative of American art and design during the period. According to Christine Minter-Dowd, Decorative Arts Consultant and Guest Curator for the exhibit, "From the earliest times Americans have demonstrated skill in adapting older design to the necessities of life. The decorative arts made in America are generally more simple and practical than their European prototypes."

Many of the pieces in the exhibit were first displayed in the Alexandria Museum, which opened in 1811 and closed in 1871 when a fire destroyed the building. Much of the collection, which included objects owned by George Washington, was salvaged, restored and is, today, in the care of the Masonic Lodge of Alexandria.

The decorative arts exhibit was made possible by a grant by the Rotary Club of Alexandria and is co-sponsored by the City of Alexandria and the George Washington Bicentennial Center.

The George Washington Bicentennial Center is located at 201 S. Washington St. in Alexandria and is open daily from 9 a.m. to 5 p.m. For information, call (703) 750-6677.

Appomattox River Authority To Use Carbon To Control Taste and Odor Problem

• ROBERT E. SAYRE, general manager of the Appomattox River Water Authority, Petersburg, has announced that the Authority has signed a three-year "Potable Water Service" contract with Calgon Corporation, Pittsburgh.

Under terms of the contract, Calgon will provide 198,000 pounds of granular activated carbon and associated services to correct taste and odor problems in the drinking water produced at the Authority's 22-million-gallon-a-day plant located at the Lake Chesdin dam near Matoaca. Appomattox will pay a monthly service fee over a three-year period.

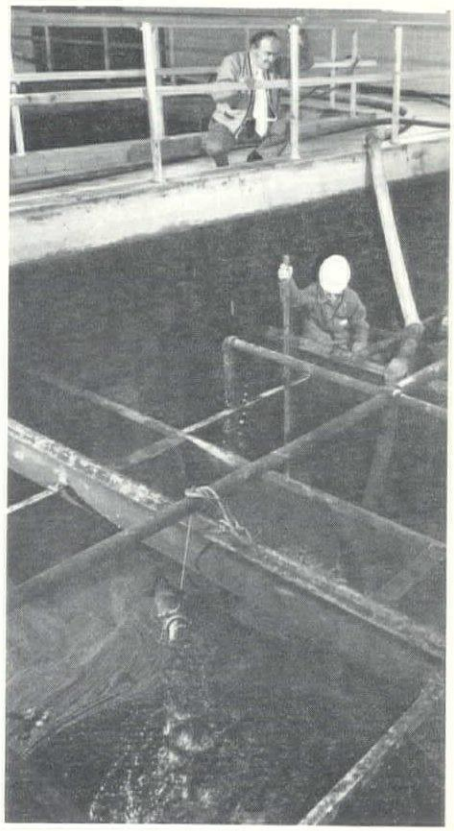
"Granular carbon is the most effective filter media for control of tast and odor in drinking water," Sayre said. Microscopic pores in the carbon act like sponges, adsorbing organic contaminants that cause foul taste and odor. The organic material fouling the Authority's water is caused by a prolific growth of algae, especially in the shallow upper reaches of Lake Chesdin, the plant's raw water source.

"We recognized that it's economically more feasible to use granular carbon through the 'Potable Water Service' than to just buy carbon from a supplier. the new Calgon 'Service' allows us to pay a monthly service fee; this eliminates the need for a major capital expense to correct the taste and odor problem." In addition to supplying the carbon, Calgon will also provide technical assistance, analytical services, install and monitor pilot columns to track performance of the carbon, and replace the carbon, when necessary.

Installation of the carbon began in December 1978.

Present treatment for taste and odor includes use of potassium permanganate, powdered carbon, superchlorination (high levels of chlorine), and dual-media filtration using sand and anthracite. The granular activated carbon supplied by Calgon will replace the anthracite in the filtration operation, and greatly reduce the need for other chemicals for taste and odor control.

The Appomattox River Water Authority serves over 85,000 consumers in the cities of Petersburg and Colonial Heights and the areas of Chesterfield, Dinwiddie and Prince George Counties. "A sparkling, fresh, good drinking water supply is important to all residential consumers, but it's also extremely important to local food processing and wine making operations. These and other industries require the highest quality water for use in their production operations," Sayre said. "Our soon-to-be-improved water supply will not only please those persons now living and working here, but I think it will be a selling point in attracting new businesses to our area."



HERE COMES THE CARBON – One of eight filters at the Appomattox River Water Authority's drinking water plant in Petersburg, Virginia, is filled with a slurry of granular activated carbon supplied by Calgon Corporation, Pittsburgh. Watching the carbon fill – and anticipating drinking water free of taste and odor – is the Authority's General Manager, Robert E. Sayre.

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Precious Metal Manufacturer Locates in Chesterfield County

• HOOVER & STRONG, Inc., of Buffalo, New York, a well-known refiner and manufacturer of precious metal, plans to move its operation to Chesterfield County, according to the Virginia Division of Industrial Development. The company is one of a dozen manufacturers in the nation who completely recycle precious metal scrap for use by jewelers.

The new manufacturing facility, a 25,000 square foot building, will be located on a 4-acre site in Southport Industrial Park in Chesterfield County. According to company president George F. Hoover, the new plant should be operational by June 1979. Initial employment will be 30.

Hoover & Strong, Inc. markets its products in the continental United States, Hawaii, Alaska, and the Virgin Islands.

Hoover & Strong, Inc. decided to move to Chesterfield County, after a careful study of locations in Georgia, South Carolina, and Virginia. They were assisted in their site selection by the Virginia Division of Industrial Development and the Chesterfield County Department of Economic Development.

Avtex Plans $20,000,000 Modernization in Front Royal

• Governor John N. Dalton and John N. Gregg, Chairman and Chief Executive Officer of Avtex Fibers Inc. of Valley Forge, Pennsylvania, have announced that a $20 million dollar loan has been secured by the company from the Farmers Home Administration which will be used to modernize Avtex's Front Royal, Virginia plant.

The loan will also permit Avtex to expedite its conversion from oil to coal while meeting federal and state environmental regulation.

Avtex, the largest producer of rayon in the United States, has six production facilities nationally, including three in Pennsylvania, one in West Virginia and two in Virginia. In addition to the Front Royal facility, Avtex operates a manufacturing plant in Radford.

In announcing the loan, Governor Dalton indicated that he was extremely pleased that Avtex would be undertaking the modernization in Front Royal, a step which would solidify the status of the company's 2200 employees there. Avtex has been operating in Front Royal for over forty years and is the city's largest employer.

Avtex chairman Gregg took note of the impact of foreign competition on domestic markets and stated his satisfaction that by upgrading the Front Royal plant Avtex will continue to be in a position to compete aggressively in the rayon field. Mr. Gregg commended Governor Dalton and other city and state officials on their assistance in obtaining the loan, and reiterated his belief that the action would have a major impact on the economic stability of Front Royal and the state of Virginia.

Industrial Cleaner Manufacturer To Open Distribution Center In Lynchburg

• LAMONT Laboratories, Inc., a manufacturer of industrial cleaners, will open a distribution center in Lynchburg, according to the Virginia Division of Industrial Development. Within two years the company plans to expand its Lynchburg operation to include the manufacture of some of its products.

The distribution center will be located in the old Consolidated Textile Mill building. It will serve five states with a complete line of industrial, automotive, and sanitary cleaners, as well as floor-scrubbing and maintenance equipment.

According to Stephen R. Proodian, manager of the Lynchburg operation, six people will initially be employed at the distribution center. Employment should eventually reach 260 when full production is under way.

Lamont Laboratories is headquartered in Londonderry, New Hampshire. The Lynchburg facility is currently their only other distribution center, although their products are marketed in many states.

The company was assisted in its site selection search by the Greater Lynchburg Chamber of Commerce and the Virginia Division of Industrial Development.

Northern Virginia Bankers Elect Harry Esmacher

• Harry Esmacher, Executive Vice President of First American Bank of Virginia, was recently elected President of the Northern Virginia Banker's Association.

Mr. Esmacher, a native of Detroit, Michigan, attended George Washington University where he received his Bachelor of Arts Degree in Accounting.

Active in community affairs, Mr. Esmacher is a Board Member of the Arlington Chamber of Commerce, a member of the Kiwanis Club, and serves on the Board of Directors of the Cancer Society.

'Market Square Fair' To be Held May 19 In Fredericksburg

• Carrying on a tradition nearly 250 years old, the townspeople of Fredericksburg gather each year in the city's cobblestone square for an old-fashioned celebration called Market Square Fair.

The fair is a colorful combination of music, crafts, food, drink, and fun. Market Square is dotted with flower carts, booths, boutiques, and costumed hostesses. Artists and craftsmen flock to the flag-bedecked square from all around the city and nearby states, to show off their skills and sell their wares.

Market Square Fair is a throwback to the first Fredericksburg Fair held in 1738, the year George Washington's father, Augustine, moved his family to Ferry Farm, just across the Rappahannock River from the city.

Live entertainment, games, and prizes are featured throughout the day, and tours of the city are available. A variety of food and drink, including home-baked goods and Colonial fruit punch, hot dogs, cotton candy and soft drinks are for sale.

There is no admission charge for Market Square Fair, to be held this year on Saturday, May 19, from 9 a.m. to 5 p.m. Proceeds will benefit the preservation projects of Historic Fredericksburg Foundation, Inc., the fair's sponsor.

Fredericksburg is a 50-minute drive from Washington, D.C. or Richmond, Va., midway between the two cities on I-95.

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Super Radiator Announces Plant in Chesterfield County

• Super Radiator, a division of McQuay Perfex Inc. of Minneapolis, Minnesota, will manufacture heat transfer coils for refrigeration and air conditioning in Chesterfield County, according to the Virginia Division of Industrial Development.

Sid D. Johnston, general manager of Super Radiator stated that the company would employ about 25 people in the $2 million facility to be constructed in the Chesterfield Airport Industrial Park. Employment could grow to as many as 50 when full production is reached.

Super Radiator will build its 30,000 square feet facility on a three-acre tract in the industrial park. Construction is expected to begin this spring with an estimated completion date set for late 1979.

Super Radiator officials were assisted in their location by the Chesterfield County Industrial Development Authority and the Virginia Division of Industrial Development.

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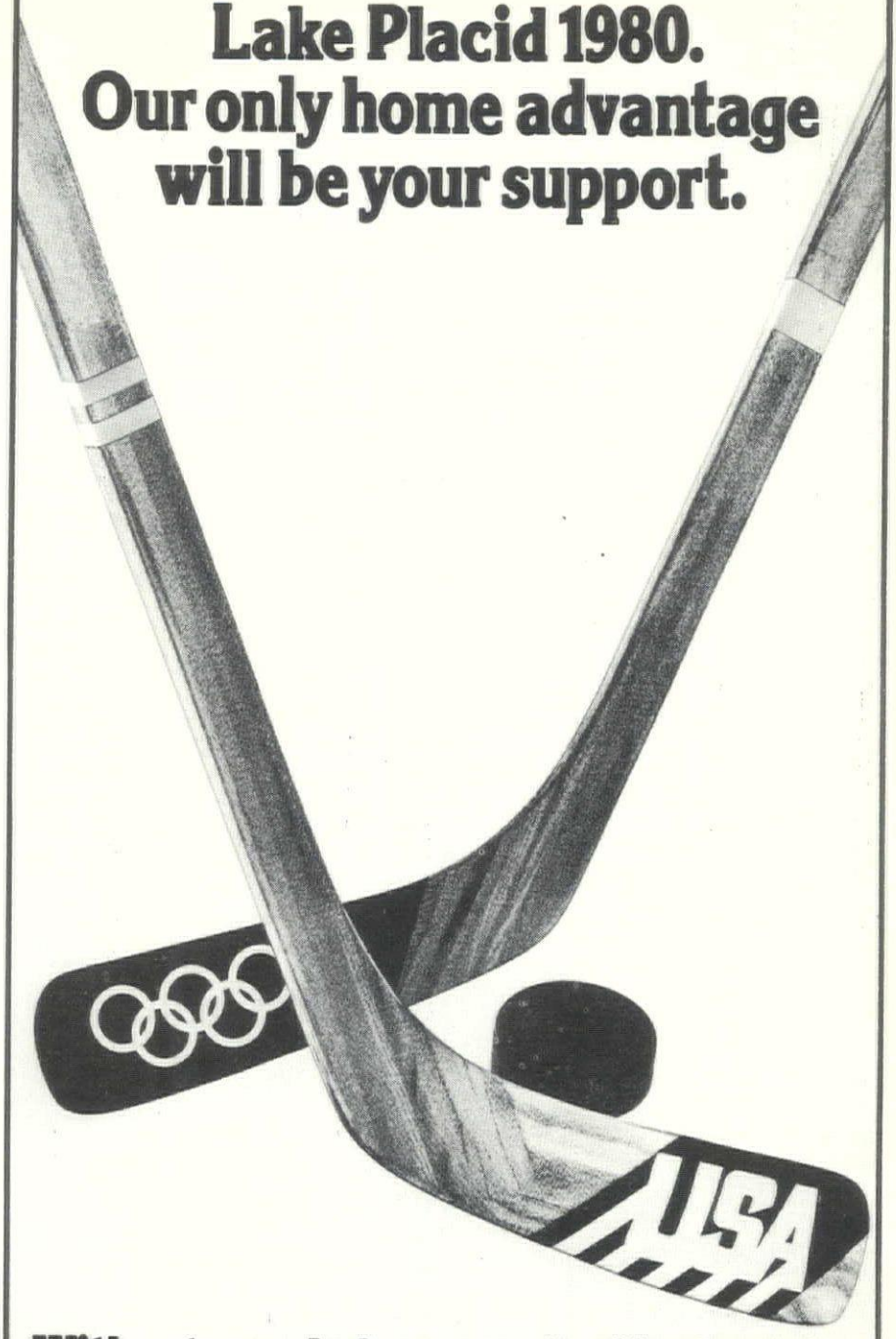
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On Architecture and Architects

(From page 7)

and people in general bear a natural tendency to avoid examinations, either of themselves or imposed from without. Where laws persist or activity requires, the periodic response to questions which indicate the nature of continuing experience or practice should be accepted and acknowledged within the profession." The final response, from Edgar Beery, states, "It may be considered to be equally as important to determine that professionals maintain a level of competency that will safeguard the life, health, safety and welfare of the citizenry as it is to determine in the first instance that they are qualified to be licensed. Licensing Boards probably have a responsibility to determine upon what basis such a judgment may reasonably be made."

It is obvious in most cases that the answers from those interviewed are remarkably consistent. The architects on a Licensing Board, however, must necessarily take a somewhat narrower view when defining architecture for licensing constrictions. A professional society, on the other hand, must and should go beyond minimum competency requirements and demand more. Such an organization must not confuse the separation of "Church and State."

This is what would appear to trouble Frank Poole in his answer to question four. How can a state require self-improvement as a condition of licensing renewal, how measure, how record? And what do you do in the case of reciprocity? How to separate continuing education related to public health, safety and welfare? Perhaps, as other professional societies suggest, it must all come down to self-assessment, self-evaluation and self-improvement. An honor system if you will, an idea John Owen touched on in his responses to questions four and five.

The one thing that is certain is that continuing education and recertification must be approached carefully and cautiously by all-professional leaders, licensing boards, consumers and legislators. There is a definite need for continued discussions, as an open question, between professionals and the professional society and between professionals and the licensing boards. We are not ready to put into concrete terms any policy on continuing education and recertification.

British Aerospace, Inc./ Rolls Royce, Inc.

(From page 11)

electrical system will have to be changed when such an expansion becomes necessary."

The $2.3 million structure was built within a mile of the runways of Dulles International Airport. The warehouse stores a variety of parts from nuts and bolts to jet engines. The offices house U.S. operations for the two British firms.

The building was designed to be energy-efficient. A heat pump system that will be compatible with a solar system in the future was specified. "Our cost analysis study showed that a solar system would have a nine-year payback," Vosbeck says. "We decided to opt for a heat pump system now and wait until solar collectors become more efficient and less expensive to convert. But it will be a relatively easy job." A by-pass on the water tank is used for the cooling system.

The electrical system was also created to allow for maximum flexibility. "It's a slab building, and we used in-slab ducts to ensure the future design options. That will be evidenced especially in the open space office area for staff which is on the second floor. We used a poke-thru system there," Vosbeck said.

Similarly, the lighting system for the office area will allow future changes to the current interior

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design. "We used a checkerboard pattern of ceiling lights," Says Vosbeck. "That way the layout of the office space will not be dictated by the lighting arrangement."

Vosbeck said one of the design considerations for the warehouse area was to make the warehouse encourage worker efficiency. "To meet that need we found some very easy answers and some very complicated solutions. On the one hand," Vosbeck says, "by painting the ceiling yellow we added a good deal of brightness to the two-story tall warehouse. In the more technical solution, we specified metal Halide lights to eliminate shadows and employees' eye strain.

In the low racking area, where the very small parts are stored, we stretched our lighting between the aisles of racks so that the lights are only seven feet high and three feet apart, spanning the aisles. In addition, we worked closely with our client to design the aisles of racks to allow for best use of the space while insuring no traffic problems for the fork-lifts and heavy equipment used everyday in the warehouse."

Because the building is located so close to Dulles' runways, sound insulation was a major consideration. Asymetrical insulated glass windows were specified to eliminate the reverberation of the jet engines through the windows. Additionally, VVKR's interior design affiliate, The Design Collaborative, specified thick wall coverings, especially in the private executive offices.

"The building is an example of how one structure can meet diverse needs without compromising on the functions of any of the building's users. It presents a positive visual image, allows for expansion and flexibility, addresses the problems of noise, and was designed to encourage worker productivity," Vosbeck says.

The VVKR Partnership maintains offices in Roanoke and Norfolk as well as Alexandria. They also have a Maryland office in College Park. In addition to their affiliated interior design firm, they also have affiliated construction management firm, The Construction Management Collaborative, which has recently completed work on the Alexandria Hospital and is currently working as CM on the new courthouse facilities in Alexandria.

"Our Construction Management Collaborative helped us to develop the scope process by which we bid this job," Vosbeck says. "It's a modified version of fast tracking. First we obtain bids from four or five general contractors on the basis of some preliminary drawings and specs. We then negotiate with the low bidder to get to a point where we and our client are comfortable with the budget. Then we complete the working drawings.

"With this system," Vosbeck says, "we don't waste time redoing working drawings because our very first set of drawings are completed to meet confirmed and guaranteed bids from the GC. Secondly, the GC has a longer lead time to order everything he needs - that ends up in a three-six month jump on inflation. It also allows the GC to line up his subcontractors in enough time to secure guaranteed costs from them. And most importantly, especially for a client such as British Aerospace with whom we have been involved for about 20 years, this system virtually guarantees that the building will come-in for budget."

Wayne Construction Co. of Arlington was general contractor.

Subcontractors & Suppliers

American Steel Products Corp., Woodbridge, hollow metal doors & frames; Arlington Woodworking & Lumber Co., Inc., McLean, millwork; Baco Co., Inc., Springfield, plumbing & HVAC; Builders Hardware Corp., Rockville, MD, hardware; Building Products Co., Landover Hills, MD, toilet accessories; Burkholder & Krieg, Merrifield, erection; Crawford Doors Sales Co., Lorton, rolling steel doors; Custom Walls & Windows, Inc., Kensington, MD, aluminum windows; Fabricated Steel Products, Inc., Cockeysville, MD, structural steel, joists, deck; The Fireline Corp., Silver Spring, MD, Halon system; The Howard P. Foley Co., Beltsville, MD, electrical; and Franklin Marble & Tile Co., Capitol Heights, MD, ceramic tile, terrazzo & slate.

Also, Vincent A. Giganti Jr. & Assoc., Washington, D. C., flagpole; Michael Gordon Air Passage Equipment, Inc., Arlington, louvers; Handling Equipment Sales, Landover, MD, loading dock equipment; High Point Sprinkler Co., Inc., Beltsville, MD, sprinkler system; Long's Fence Co., Inc., Capitol Heights, MD, fencing; Louver Drape, Inc., Baltimore, MD, vertical blinds; Marty's Floor Covering Co., Inc., Alexandria, carpet, resilient tile; Miller Building Supply Co., Inc., Bailey's Crossroads, kitchen equipment; Otis Elevator Co., Washington, D. C., elevator; and V. F. Pavone Construction Co., Alexandria, masonry.

Others were: Perrin & Martin, Inc., Arlington, roofing; Pied Piper of Virginia, Silver Spring, MD, termite control; H. H. Robertson Co., Washington, D.C., insulated metal panels; Rodgers Excavating Co., Inc., Fairfax, excavation, curb & gutter; Service Glass Industries, Inc., Frederick, MD, aluminum doors & frames, glass & glazing; Steel Products, Inc., Rockville, MD, compartments, lockers, etc.; Strescon Industries, Inc., Silver Spring, MD, Flexicore slabs; Tate Interiors, Elkridge, MD, access floor; Thomsson Steel Co., Beltsville, MD, reinforcing steel; Virginia Concrete Co., Inc., Springfield, concrete; W & W Fabricators, Inc., LaPlata, MD, miscellaneous metal; Williams Enterprises, Fairfax, erection of metal panels; Wilmar Contractors, Inc., Vienna, painting, caulking etc.; and T.M. Woodall Corp., Takoma Park, MD, dray wall, insulation & acoustic tile.

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Loudoun County Administration Building

(From page 13)

Enterprises, Inc., McLean, waterproofing; Wilmar Contractors, Inc., Vienna, caulking & painting contractor; R. D. Bean, Inc., Beltsville, MD, other roofing & sheet metal; Vienna Glass Co., Vienna, glass & glazing contractor; W. L. Frazier, Fairfax, metal doors & frames, windows; and J. B. Kendall Co., Washington, DC, hardware supplier.

Others were, McClary Tile, Inc., Alexandria, ceramic tile; C & H Contracting, Inc., Bladensburg, MD, acoustical treatment; Marty's Floor Covering Co., Inc., Alexandria, resilient tile; Fairfax Tile & Linoleum Co., Inc., Alexandria, carpet; Creative Signs, Inc., College Park, MD, specialties; Montgomery Elevator Co., Rockville, MD, elevators; James E. Feeney Co., Inc., Arlington, plumbing/heating/ventilating/air conditioning contractor, & lighting fixtures/electrical equipment supplier; The Howard P. Foley Co., Beltsville, MD, electrical contractor; and Gerald Finn, Williamsburg, carved wood County Seal.

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Monumental Church *(From page 18)*

The few who remained welcomed others, and the church again grew strong. To bring the interior to meet mid-nineteenth century liturgical needs, substantial remodeling began. The bright white room became turquoise, orange and dark green. Through successive remodelings, the "interior became a negative of what was intended by Mills," says Winthrop.

"The early nineteenth century view of religious space was bright, airy, and filled with the light of God. By the end of the century, the preference was for a dark, somber, and mysterious space for worship and Monumental was predominantly dark brown. If Lafayette and Marshall had been alive to come to church in 1901, they probably would not have recognized the church they helped to establish," surmises Winthrop.

Each of three major remodelings was done with ever decreasing quality. The horseshoe gallery was drastically altered around 1875 to cover five instead of seven walls of the octagon. A Sunday school building which was added around 1870 destroyed the East portico of the church. The building was enlarged five times between 1875 and 1920 with a series of "lean-to" additions that were dangerously unsound by 1970. When plaster fell from the dome in the early 1960s, the striking frescoes added to the dome in 1901 were removed by the congregation. The building became marginally useless as the 1970s approached.

Ever since the MVC Foundation had acquired the building, efforts had been underway to make its valuable space useful to the school. The former congregation had transferred its modest endowment to the foundation as a starting point for restoration funding. Following a visit from the Society of Architectural Historians in 1968 the foundation decided to launch upon a full restoration to return the building to the splendor of its 1814 character.

Through research, architects learned the original configuration of the gallery. The unsafe Sunday school building was removed, re-exposing the East entrance, which had been the main entrance in 1814.

Clues found by architectural sleuths enabled an exact reconstruction of the interior. The floor is of plain boards, the gallery is a curved horseshoe, the walls are oyster white, the dome creates a reverberant acoustic, and the preaching platform in an apse at the front of the church is nearly as high as the gallery. Gone are the dark brown paint, the heavy altar rail, the extended chancel platform, and the Victorianized classic organ case that hid the simple elegance of Mills' most brilliant church.

The tendency to regard Mills as a rather stolid, heavy-handed architect has been negated by the restoration of Monumental Church, says Winthrop. "This building shows him as having had an extraordinary imagination capable of great subtlety."

The subtlety is seen in the gentle curves of the gallery and in the unusual columns designed to support it. Mills visually balanced the pulpit on one side of the church with an organ on the opposite side of the church, in the gallery where he provided a flat floor for it.

The organ Historical Society found that the first organ, which arrived around 1816, was built in London by Henry Bevington. It was replaced in 1830 by an instrument built in New York City by Henry Erben, who in 1850 supplied yet a larger instrument for the gallery. During the major remodeling of 1897, the organ was moved from the gallery to a space in the northeast wall, behind which the Sunday school building was attached.

Currently, the MCV Foundation is seeking funds to restore a Henry Erben organ for the gallery, and to complete several other details of the restoration. The gallery floor requires finishing and seating, the East portico must be rebuilt, the exterior of the church is stable but should be painted, the monument attached to the south wall is not stable and requires immediate attention, and minor ornamental additions are needed in the interior, including a pulpit.

Also, creature comforts like air conditioning and rest facilities need to be added. The basement which is built with graceful brick arches to support the floor above, could be finished to provide smaller function rooms and space for the display of relics and stained glass windows from the building's Victorian era, say the architects.

The cities of Philadelphia, Baltimore and Charleston, South Carolina, all have examples of Mills' architecture extant. But, unlike them, Richmond has retained the only remaining example of his most innovative and grandest style of church architecture. When it re-opened in November, it was seen in its original character for the first time since 1848.

Conquest Moncure & Dunn, Inc. of Richmond was general contractor and handled structural wood and floor finishing.

Subcontractors & Suppliers
(All Richmond firms)

M & M Wrecking Co., Inc., demolition; Southern Brick Contractors, Inc., masonry supplier & stone work contractor; Cruickshanks Iron Works and Schrader Machine & Welding, Inc. steel suppliers; Ruffin & Payne, Inc., A. E. Tate Lumber Co., Inc. T M S Millwork, Lowe's of Richmond and Moore's Building Supplies, structural wood; Miller Manufacturing Co., Inc., structural wood & windows; N. W. Martin & Bros., Inc., roofing; F. Richard Wilton, Jr., Inc., plaster contractor; W. E. Wilborn Co., Inc. and W. W. Nash & Sons, Inc., painting contractors; Reames & Moyer, Inc., plumbing/heating contractor; and Chewning & Wilmer, Inc., electrical contractor.

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First National Exchange Bank

(From page 23)

counterclockwise while climbing to the Main Street level where exit can be made.

Pedestrians will enter at the Main Street level through two separate entrances. One faces directly into Main Street while the other is reached by crossing a plaza and entering through a colonnade. Both entrances lead directly to the main banking lobby.

The total enclosed area is 13,200 square feet distributed on three levels. The lower level or basement has 3,600 square feet and houses expansion space and storage areas, together with mechanical and electrical functions.

The middle level at the Main Street elevation is the primary public service area. It provides 4,800 square feet and is dominated by the open lobby and officers' platform. Seven teller stations are provided and six officer and secretary stations can be accommodated on the platform. Adjacent to the teller area at one end, is the cash room. At the other end are a generous vault and coupon booths. An office for the bank president and a conference room are adjacent to the platform. A correspondence lift assists documents circulation between floors. Service also includes a night depository and provisions for a walk up exterior banking unit.

The second floor houses a board room, bookkeeping operations, a records retention vault and an employee lounge. This level, like the main floor, provides 4,800 square feet.

The substructure will be reinforced concrete. Masonry cavity bearing wall construction will provide verticle support while steel joist with metal decking and concrete topping will furnish floor support. Stair construction will be steel prefabricated tread, risers and landings enclosed in a fire-rated concrete block tower.

The exterior closure will be a dark red brick. Aluminum entrance doors and frames are provided at the main level. Wood bay windows are located around the perimeter at the upper level. All glass is double pane insulating. A built-up roof will be used. The proper use of insulation and sealants will offer excellent energy economies and maintain moisture resistance.

Partitions, where permanent, will be concrete masonry. Those to be moved later will be metal stud and drywall. Most surfaces will be painted with the occasional use of wall coverings.

Doors will be solid core wood veneer with a transparent finish. Frames are generally metal to receive paint.

An acoustical tile, lay-in ceiling will dominate. In certain instances painted drywall will be substituted.

Sound control will be furnished throughout.

Several floor materials will be used. The main lobby is to be wood parquet bordered with brick. Vinyl tile and carpet are interspersed throughout the remainder of the facility.

The bank will be air conditioned by a split system air conditioner with economizer cycle and multiple zone control or equal. Central station multiple zone climate changer will be located in the mechanical room and will be complete with cooling coil, fan, filters, fan motor and drive, drain pan, controls and refrigerant piping. Air cooled condensing unit will be roof mounted.

Heating will be accomplished through duct mounted water heating coils fed by a gas hot water boiler located in the mechanical room. Supplementary heating will be provided at windows by hot water electric baseboard heaters.

The building will be separated into eight zones each controlled by a separate thermostat. Air will be supplied to each zone through ceiling diffusers and will be returned through ceiling grilles using the ceiling space as a return plenum. Mechanical ventilation will be provided in toilet areas.

Plumbing work will consist of plumbing fixtures, hot and cold domestic water system, and sanitary and storm systems.

Recessed fluorescent lighting will be used throughout the bank except in lobby where recessed mercury vapor will be used. Lighting will be locally switched.

Underfloor duct will be provided under the first floor officer's platform.

Electrical system shall be served underground to the panel located in basement.

Empty conduit and boxes shall be provided for telephone and bank alarm systems.

Customer service features will include moneyvault door and ventilator; vault door (basement); records storage vault door; vault cash room partition and door; safe deposit boxes (1200); surveillance and alarm system; night depository and chest; drive-up window and remote unit and DominiBank walk-up banking.

Much effort was made both inside and out to conform with Lexington's historic preservation goals. A landscaped plaza with brick pavers which lead into the sidewalk pavers should do much to complement the numerous 19th Century eclectic styles which dominate the downtown area.

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Schweickert Residence *(From page 25)*

preservative treated wood including trim, decks, stairs, handrails, etc. The house was stained to blend into the natural surroundings.

Working on this project was a rewarding experience for the owner, the contractor and the architect. The project was built for $28.00 per square foot, which was lower than projected. The owner repeatedly complimented the contractor and architect for a job well done and the owner is convinced that architects do, indeed, earn their fee.

Viking Enterprise, Inc. of Richmond was general contractor and handled concrete work, masonry work, carpentry, waterproofing and caulking.

The owner handled wall coverings and lighting fixtures.

Subcontractors & Suppliers
(Richmond firms unless noted)

James T. Bush Construction Co., Inc., excavating; Cherotuck Nurseries, landscaping & landscaping contractor; Barnes Lumber Co., Charlottesville, foundations & millwork; Miller Manufacturing Co., Inc., structural wood & paneling; H. Beckstoffer Sons, Inc., millwork & wood doors; Custom Fixture & Furniture Co., Inc., cabinets; Cedar Roofs of Richmond, Inc., roofing; Lakeside Insulation Co., roof/wall/foundation insulation; and Pella Virginia, Inc., windows.

Also, Pleasants Hardware, hardware supplier; American Applicators, Inc., Chester, gypsum board contractor; Richmond Tile & Marble Co., ceramic tile; L & M Tile & Floor Covering Co., Inc., resilient tile; Colonial Carpet & Installers, Inc., carpet; William Childress, Sandston, painting contractor; The Kohler Co., Kohler, Wisconsin, plumbing fixture supplier; Lawrence R. Muse Plumbing-Heating-Air Conditioning Corp., plumbing contractor; Community Heating & Air Conditioning Co., Inc., Glen Allen, heating/ventilating/air conditioning contractor; and Lewis Electric Co., electrical contractor.

University Dormitory Complex *(From page 29)*

in one particular language or as a volunteer house composed of students significantly involved in volunteer work and social projects, or as an Honors hall for students demonstrating high academic achievement.

To fulfill the program for group cluster housing units an area was selected along the western shore of the present eleven acre lake. This narrow hilly site lends itself well to cluster housing designed on a residential scale and the environment is particularly suitable for this use. General design developed to provide thriteen independent units in four buildings of from two to four units each for 364 students.

Each unit is 2-½ stories which conforms to the existing terrain and takes full advantage of the lake front. The main entrances are to the second level from hillside walks. Lounges, kitchens, and recreational spaces opening to terraces are on the first level which fronts on the lake side isolating these activities from the adjacent residential neighborhood. Student rooms are located on second and third levels with control from office on second level adjacent to main entrance. Stairs and baths form functional common core facilities.

Structure is generally wall bearing steel floor joists with wood truss roof construction. Walls are brick and concrete block masonry. Doors and windows are bronze duranodic aluminum with bronze insulating glass. Accent walls and trim are of stained western cedar. An oil fired heating and cooling plant is located at the center of the complex. All areas are heated and air conditioned.

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Nielsen Construction Co., Inc. of Harrisonburg was general contractor and handled sodding, seeding, etc., foundations, concrete work, masonry work, stonework, steel erection, roof deck, handrails, carpentry, waterproofing, wall insulation and foundation insulation.

James Madison University, the owner, handled landscaping.

Subcontractors & Suppliers
(Harrisonburg firms unless noted)

Plecker Construction Co., Staunton, excavating; Dodson Brothers Exterminating Co., Staunton, termite control; M. A. Layman & Sons, Inc., paving contractor; Valley Steel Corp., Salem, reinforcing; Superior Concrete Inc., concrete supplier; Webster Brick Co., Roanoke and Valley Blox, masonry suppliers; Riverton Corp. Riverton, mortar; Economy Cast Stone Co., Richmond, stonework supplier; Augusta Steel Corp., Verona, steel supplier, steel joists, miscellaneous metal & specialties; Automated Structures, Inc., Charlottesville, structural wood; Mill Cabinet Shop, Inc., Bridgewater, millwork & cabinets; and Commercial Caulking Co., Richmond, caulking.

Also, Don Largent Roofing Inc., other roofing & metal flashing; Rocco Glass Co., a div. of Rocco Building Supplies, Inc., glass, glazing contractor & window wall; Williamsburg Steel Products Co., Brooklyn, NY, metal doors & frames; Mac Lea Sales Co., Baltimore, MD, wood doors; Ar-Wall Inc. of Va., Richmond, windows; Pleasants Hardware, hardware supplier & specialties; James F. Logan, plaster contractor; Farrel Hensley Tile Contractor, ceramic tile; A-D Applicators, acoustical treatment; and Heatwole Tile Co., resilient tile.

Others were, A. C. Campbell, painting contractor & wall covering; Sherwin Williams Paint Co., paint supplier; Sherwin Williams Paint Co., Cleveland, Ohio, paint manufacturer; Jitty Fire Hose Rack Co., New York, NY, equipment; C. E. Thurston & Sons, Inc., Richmond, equipment; Crawford Sprinkler Co. of Charlotte, Inc., Charlotte, NC, sprinkler contractor; Kohler Co., Kohler, Wisconsin, plumbing fixture supplier; Riddleberger Brothers, Inc., plumbing/heating/ventilating/air conditioning/electrical contractor; and Tristate Electrical Supply Co., Hagerstown, MD, lighting fixtures/electrical equipment supplier.

EASCO Plant *(From page 35)*

annual process water heating required on a single shift schedule after EASCO installs all of their film processors.

In climates subject to freezing weather, liquid solar energy systems must be designed to avoid freezing in the collectors and outdoor piping. One technique employed is to drain the water out of the collectors into a holding tank whenever the water temperature falls to 35° F. or whenever the pump stops. Another technique utilizes a heat exchanger which has water on one side and a water-antifreeze solution, which is circulated through the collectors, on the other. Because of the expense and inefficiency of the heat exchanger and of a water-ethylene glycol solution as compared to water, Torrence, Dreelin, Farthing & Buford, Inc., recommended to EASCO that a drain down type of system be utilized. All of the piping is either copper or CPVC plastic pipe, and the fluid passages of the solar collectors are copper. Constant flow balancing values are installed in the piping to each column of collectors to ensure equal flow through each column.

A differential thermostat is used to control the operation of the system. When the thermostat determines that the solar collector can add heat to the process water held in an insulated 5,000 gallon underground storage tank, water is pumped out of the tank, up through the collector array and then back into the tank. When the collectors are no longer required for heat, the pump is stopped and the water drains back into the tank.

On a call for hot water by the film processors, a second pump is used to pump water from the storage tank through a hot water heater to the processors. The oil fired hot water heater will bring the temperature of the process hot water up to 115° F. if the water is not already hot enough. As water is pumped out of the tank, a fill valve will open to maintain the tank water level with water from the county mains.

The bid cost for the installed solar energy system by the mechanical contractors, Reames and Moyer of Richmond, was $40,000. This equals a cost of $18.70 per gross square foot of collector area or $21.20 per net square foot of collector area.

Manual calculations indicated a payoff, for the owner, of the initial investment of 8 years, based on a cost of oil in 1978 of $0.50 per gallon and an annual rise in the cost of oil of 10% per year. These calculations were verified using a computer program, which gave an 8.7 year payback period for the system. The additional 10% investment tax credit allowed by the Energy Tax Act of 1978 should reduce the payoff period to under 8 years. EASCO considered an 8 year payback period for the solar energy system to be satisfactory and decided to proceed with its construction.

The building was occupied in July, and the solar energy system was put into operation in early November after the pumps arrived.

Heindl-Evans, Inc., of Mechanicsville was general contractor and handled excavating, sodding, seeding, etc., foundations, concrete work, carpentry, paneling, waterproofing and wall insulation.

Subcontractors & Suppliers
(Richmond firms unless noted)

Lee Hy Paving Corp., paving contractor; Bethlehem Steel Corp., reinforcing; Massey Concrete Corp., concrete supplier; HENCO masonry contractor/supplier & mortar; Structural Steel Co., Inc., Roanoke, steel supplier, steel joists, miscellaneous metal & handrails; Royal Steel Erectors & Crane Service, steel erection & steel roof deck; T M S Millwork, millwork, wood doors & windows; Richmond Lumber & Building Supply Co., cabinets; Commercial Caulking Co., caulking; J. B. Eurell Co., built-up roof, roof insulation & sheet metal–roof; American Door & Glass, Inc., glass, glazing contractor, window wall & storefront; and Pleasants Hardware, metal doors & frames & hardware supplier.

Also, M.E.M. Interiors, Inc., Mechanicsville, gypsum board contractor; Manson & Utley, Inc., acoustical treatment & resilient tile; W. E. Wilborn Co., Inc., painting contractor/supplier & wall covering; Reames & Moyer, Inc., plumbing/heating/ventilating/air conditioning contractor; and Tate & Hill, Inc., electrical contractor.

Solar collectors were manufactured by Sunworks, Inc. of Hartford, Connecticut; supplied by Westinghouse Corp; and installed by Reames & Moyer, Inc. The owner furnished the carpeting.

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